

# **Supplementary Advice on Conservation Objectives for South Rigg Marine Conservation Zone**

**December 2025**



The information provided in this document sets out JNCC's supplementary advice on the conservation objectives set for South Rigg Marine Conservation Zone (MCZ), hereafter referred to as 'the site'. This document forms part of JNCC's formal conservation advice package for the site and must be read in conjunction with all parts of the package as listed below:

- **Background Document** explaining where to find the most up to date version of the advice package, JNCC's role in the provision of conservation advice, how the advice has been prepared, when to refer to it and how it can be applied;
- **Conservation Objectives and Management Advice** document setting out the broad ecological aims (conservation objectives) for the site and JNCC's advice on;
  - protected feature condition;
  - conservation benefits that the site can provide if managed effectively; and
  - conservation measures that JNCC consider are required to support achievement of the conservation objectives stated for the site.
- **Advice on Operations** providing information on those human activities that, if taking place within or near the site, can impact it and hinder the achievement of the conservation objectives stated for the site.

The most up-to-date conservation advice package for the site can be downloaded from the [conservation advice section of the Site Information Centre](#) (SIC) on JNCC's website.

The advice presented in this document describes the ecological characteristics or 'attributes' of the site's protected features as specified in the site's conservation objectives listed in the site's [Designation Order](#).

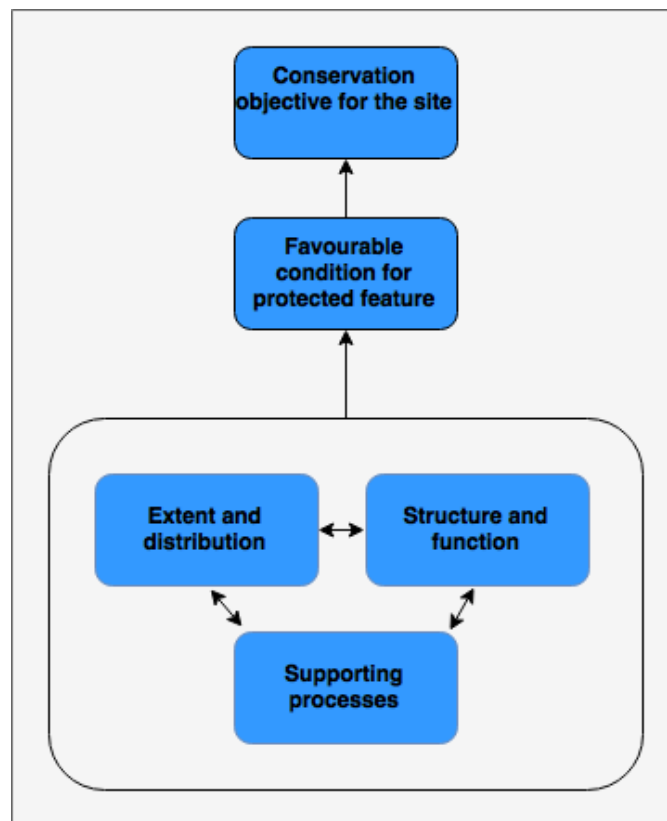
- [moderate energy circalittoral rock](#),
- [subtidal mud](#),
- [subtidal sand](#),
- [sea-pen and burrowing megafauna communities](#),
- [subtidal coarse sediment](#), and
- [subtidal mixed sediments](#).

These attributes include extent and distribution, structure and function and supporting processes.

Figure 1 below illustrates the concept of how a protected feature's attributes are interlinked: with impacts on one potentially having knock-on effects on another e.g. the impairment of

any of the supporting processes on which a feature relies can result in changes to its extent and distribution and structure and function.

Collectively, the attributes set out in Table 1 – 3 below, along with the objectives set for each of them, describe the desired ecological condition (favourable) for the site's protected features. All attributes listed in Table 1 – 3 must be taken into consideration when assessing impacts from an activity.



**Figure 1. Conceptual diagram showing how feature attributes are interlinked and collectively describe favourable condition and contribute to the conservation objectives stated for the site.**

In Table 1 - 3 below, the attributes for the moderate energy circalittoral rock, subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities, subtidal coarse sediment and subtidal mixed sediments, protected features are listed respectively. An objective of recover or maintain is set for each protected feature attribute, reflecting our current understanding of available evidence e.g., whether it indicates some of a protected feature's extent is lost and needs to be recovered or that extent is not lost and needs to be maintained to ensure the protected feature is in overall favourable condition. Where a recover objective is advised and there is considerable uncertainty as to whether recovery is possible, this will be noted alongside the objective.

The rationale for setting an objective is provided in the summary of evidence column and supporting references listed in the reference section at the end of this document.

**Note:** when a maintain objective is set, this does not preclude the need for management, now or in the future to ensure a protected feature remains in favourable condition.

**Table 1: Supplementary Advice on Conservation Objectives for moderate energy circalittoral rock protected feature of the site.**

In summary, the moderate energy circalittoral rock protected feature is considered to be in favourable condition. This is based on our understanding of the impacts of human activities taking place within, or in close proximity to the site, at the time of writing. Active management of emerging human activities may be required to maintain the protected feature's extent and distribution, structure and function and supporting processes. Please see the Conservation Objectives and Management Advice document available in the [conservation advice section of the SIC](#) for JNCC's advice on the management of activities which JNCC consider is needed to maintain in favourable condition the moderate energy circalittoral rock protected feature of the site.

Further information on activities capable of affecting the protected features of the site can be found in the Advice on Operations workbook available also in the [conservation advice section of the SIC](#).

Attribute	Summary of evidence	View of attribute condition & objective	Confidence in attribute condition
Extent and distribution	<p>The extent and distribution of moderate energy circalittoral rock is defined by its physical composition (particle size), energy level, and biological assemblages reported to be present. Any changes to the composition, energy level, and biological assemblages brought about by human activities may impact the conservation status of the feature.</p> <p>Within the site there is evidence from Vessel Monitoring System (VMS) data up to the year 2020 of demersal trawling having taken place within the site but does not overlap with the moderate energy circalittoral rock extent and distribution.</p> <p>To the best of our knowledge, there are no human activities known to be occurring which could impact the extent and distribution of the moderate energy circalittoral rock feature at the time of writing (demersal fishing and cable maintenance activities). Therefore, JNCC advise a maintain objective.</p>	Favourable – needs to be maintained	Low – JNCC has a baseline understanding of the extent and distribution of moderate energy circalittoral rock within the site based on data from a dedicated verification survey that took place in 2012 (Evans <i>et al.</i> , 2016). Evidence for impact is indirect, based on our understanding of the sensitivity of moderate energy circalittoral rock to pressures associated with human activities known to have taken place in the site; in this case bottom-contacting fishing gear (Tyler-Walters <i>et al.</i> , 2023 & JNCC. 2018).
Structure and function	Structure and function of moderate energy circalittoral rock pertains to the physical structure itself (finer scale topography) and its biological structure (the presence of key and influential species and characteristic communities). JNCC does not consider that there is enough evidence to assess the	Favourable – needs to be maintained	Low – JNCC has a baseline understanding of the structure and function of moderate energy circalittoral rock with the site based on data from a dedicated verification survey that took place in 2012 (Evans, <i>et al.</i> ,

	<p>conservation status of the key and influential species associated with the protected rock feature of the site. However, JNCC's condition assessment for the site concludes that the structure and function of the moderate energy circalittoral rock within the site is unlikely to have been adversely affected by human activities (demersal trawling) that overlap with this feature within the site. JNCC therefore advises a maintain objective on this basis.</p>		<p>2016). Evidence for impact is indirect, based on our understanding of the sensitivity of moderate energy circalittoral rock and their associated biological communities to pressures associated with human activities known to have taken place in the site (Tyler-Walters <i>et al.</i>, 2023 &amp; JNCC, 2018).</p> <p>Our information about activities within the site is incomplete. The best available evidence underpinning our understanding of fishing activity is up until the year 2020 and human activities evidence is insufficient to support an assessment of the potential impact of static fishing gears. The assessment is also limited by the lack of information about maintenance activities associated with cabling within the site and our lack of understanding of the key and influential species for this feature.</p>
Supporting processes	<p>Supporting processes with respect to moderate energy circalittoral rock include hydrodynamic regime and water quality. There is no evidence to suggest that human activities are having an adverse impact on the typical hydrodynamic regime to which the site is exposed. Whilst it is noted that the Celtic Seas OSPAR region within which the site is located has been assessed to have a poor contaminant status (Larsen 2022), this is insufficient evidence to assess water or sediment quality in the site. Moreover, JNCC have no reason to believe that activities have led to an alteration to the hydrodynamic regime operating on this site. Overall, there is no evidence to suggest that supporting processes that operate at this site are being impeded with respect to supporting the conservation status of moderate energy circalittoral rock. JNCC therefore advises a maintain objective.</p>	Favourable – needs to be maintained	<p>Low – The evidence-base supporting JNCC's assessment against this attribute draws upon data from the Celtic Sea Region (Larsen <i>et al.</i>, 2022), rather than any evidence available from within or in close proximity to the site itself. This lack of data pertaining to water quality within the site limits our assessment. Moreover, there is a lack of time series data about water quality and on how human activities may have impacted this.</p>

**Table 2: Supplementary Advice on Conservation Objectives for subtidal mixed sediments protected feature of the site.**

In summary, the subtidal mixed sediments protected feature is considered to be in favourable condition. This is based on our understanding of the impacts of human activities taking place within, or in close proximity to the site, at the time of writing. Active management of emerging human activities may be required to maintain the protected feature's extent and distribution, structure and function and supporting processes. Please see the Conservation Objectives and Management Advice document available in the [conservation advice section of the SIC](#) for JNCC's advice on the management of activities which JNCC consider is needed to maintain the subtidal mixed sediments protected feature of the site. Further information on activities capable of affecting the protected features of the site can be found in the Advice on Operations workbook available also in the [conservation advice section of the SIC](#).

Attribute	Summary of evidence	View of attribute condition & objective	Confidence in attribute condition
Extent and distribution	<p>The extent and distribution of subtidal mixed sediments is defined by sediment composition and biological assemblages. Any changes to sediment composition and biological assemblages caused by human activities may impact the conservation status of the feature.</p> <p>Within the site there is evidence from Vessel Monitoring System (VMS) data up to the year 2020 of demersal trawling having taken place within the site but does not overlap with the subtidal mixed sediments extent and distribution.</p> <p>To the best of our knowledge, there are no human activities known to be occurring over the subtidal mixed sediments extent and distribution and JNCC therefore advise a maintain objective.</p>	Favourable – needs to be maintained	<p>Low – JNCC has a baseline understanding of the extent and distribution of subtidal mixed sediments within the site based on data from a dedicated verification survey that took place in 2012 (Evans, <i>et al.</i>, 2016). Evidence for impact is indirect, based on our understanding of the sensitivity of subtidal mixed sediments to human activities known to have taken place in the site; in this case bottom-contacting fishing gear (Tyler-Walters <i>et al.</i>, 2023 &amp; JNCC. 2018).</p> <p>The best available evidence underpinning our understanding of fishing activity is up until the year 2020 and human activities evidence is insufficient to support an assessment of the potential impact of static fishing gears. Information is also lacking about maintenance activities associated with cabling within the site and its potential impact on the extent and distribution of the protected feature.</p>

Structure and function	<p>Structure and function of subtidal mixed sediments pertains to the physical structure itself (finer scale topography and sediment composition) and its biological structure (the presence of key and influential species and characteristic communities). JNCC does not consider that there is enough evidence to assess the conservation status of the key and influential species associated with the protected feature subtidal mixed sediments within the site. However, JNCC's condition assessment for the site concludes that the structure and function of the subtidal mixed sediments within the site is unlikely to have been adversely affected by human activities (demersal trawling) that overlap with this feature within the site. JNCC therefore advises a maintain objective on this basis.</p>	Favourable – needs to be maintained	<p>Low – JNCC has a baseline understanding of the structure and function of subtidal mixed sediments with the site based on data from a dedicated verification survey that took place in 2012 (Evans, <i>et al.</i>, 2016).</p> <p>Evidence for impact is indirect, based on our understanding of the sensitivity of subtidal mixed sediments and their associated biological communities to pressures associated with human activities known to have taken place in the site; in this case bottom-contacting fishing gear (Tyler-Walters <i>et al.</i>, 2023 &amp; JNCC, 2018).</p> <p>Our information about activities within the site is incomplete. The best available evidence underpinning our understanding of fishing activity is up until the year 2020 and human activities evidence is insufficient to support an assessment of the potential impact of static fishing gears. The assessment is also limited by the lack of information about maintenance activities associated with cabling within the site and our lack of understanding of the key and influential species for this feature.</p>
Supporting processes	<p>Supporting processes with respect to subtidal mixed sediments include hydrodynamic regime, water and sediment quality. There is no evidence to suggest that human activities within, or in close proximity to, the site are having an adverse impact on the typical hydrodynamic regime to which the site is exposed. Whilst it is noted that the Celtic Seas OSPAR region within which the site is located has been assessed to have a poor contaminant status (Larson 2022), this is insufficient evidence to assess water or sediment quality in the site. Overall, there is no evidence to suggest that supporting processes that operate at this site are being impeded with respect to supporting the presence of</p>	Favourable – needs to be maintained	<p>Low - The evidence-base supporting JNCC's assessment against this attribute draws upon data from the wider Celtic Sea Region (Larsen <i>et al.</i>, 2022), rather than any evidence available from within or in close proximity to the site itself. This lack of data pertaining to water quality within the site limits our assessment. Moreover, there is a lack of time series data about water quality and on how human activities may have impacted this.</p>



	subtidal mixed sediments. JNCC therefore advises a maintain objective on this basis.		
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**Table 3: Supplementary Advice on Conservation Objectives for subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities and subtidal coarse sediment protected features of the site.**

In summary, the subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities and subtidal coarse sediment protected features are considered to be in unfavourable condition and need to be recovered. This conclusion is based on evidence that suggests mobile bottom-contacting fishing practices taking place may have impacted upon the extent and distribution, and structure and function, of the subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities, and subtidal coarse sediment protected features of the site. Please see the Conservation Objectives and Management Advice document available in the [conservation advice section of the SIC](#) for JNCC's advice on the management of activities which JNCC consider is needed to recover the subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities, and subtidal coarse sediment protected features of the site. Further information on activities capable of affecting the protected features of the site can be found in the Advice on Operations workbook available also in the [conservation advice section of the SIC](#).

Attribute	Summary of evidence	View of attribute condition & objective	Confidence in attribute condition
Extent and distribution	The extent and distribution of subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities, and subtidal coarse sediment are defined by their sediment composition and biological assemblages. Any changes to sediment composition and/or biological assemblages brought about by human activities may impact the conservation status of the feature. Within the site there is evidence from Vessel Monitoring System (VMS) data up to the year 2020 of high levels of demersal trawling having taken place over the subtidal mud and subtidal sand, and moderate to high levels of demersal trawling over the sea-pen and burrowing megafauna communities. Fishing (demersal trawling) intensity has reduced over subtidal coarse sediment over time; however, this feature will require time to recover following reduction in fishing pressure. Intensive demersal trawling activities has the potential to adversely affect the biological assemblages associated with all four of these protected features. As such, JNCC advises a recover objective.	Unfavourable - needs to be recovered	<p>Low – JNCC has a baseline understanding of the extent and distribution of subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities, and subtidal coarse sediment within the site based on data from a dedicated verification survey that took place in 2012 (Evans, <i>et al.</i>, 2016).</p> <p>Evidence for impact is indirect, based on our understanding of the sensitivity of subtidal sand, subtidal mud and sea-pen and burrowing megafauna communities, and subtidal coarse sediment, and their associated biological communities, to pressures associated with human activities known to have taken place in the site; in this case bottom-contacting fishing gear (Tyler-Walters <i>et al.</i>, 2023 &amp; JNCC, 2018).</p> <p>Our information about activities within the site is incomplete. The best available evidence underpinning our understanding</p>

			<p>of fishing activity is up until the year 2020 and human activities evidence is insufficient to support an assessment of the potential impact of static fishing gears. The assessment is also limited by the lack of information about maintenance activities associated with cabling within the site.</p>
Structure and function	<p>Structure and function of subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities and subtidal coarse sediment, pertains to the physical structure of the protected features themselves (finer scale topography and sediment composition) and their biological structure (the presence of key and influential species and characteristic communities). JNCC does not consider that there is enough evidence to assess the conservation status of the key and influential species associated with these four protected features of the site. However, based on the same evidence presented under extent and distribution, JNCC conclude that the structure and function of subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities and subtidal coarse sediment, may have also been impacted. JNCC therefore advise a recover objective.</p>	Unfavourable - needs to be recovered	<p>Low – JNCC has a limited baseline understanding of the structure and function of subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities and subtidal coarse sediment within the site based on data from a dedicated verification survey that took place in 2012 (Evans, <i>et al.</i>, 2016). Evidence for impact is indirect, based on our understanding of the sensitivity of subtidal sand, subtidal mud and sea-pen and burrowing megafauna communities, and subtidal coarse sediment, and their associated biological communities, to pressures associated with human activities known to have taken place in the site; in this case bottom-contacting fishing gear (Tyler-Walters <i>et al.</i>, 2023 and JNCC, 2018).</p> <p>Our information about activities within the site is incomplete. The best available evidence underpinning our understanding of fishing activity is up until the year 2020 and human activities evidence is insufficient to support an assessment of the potential impact of static fishing gears. The assessment is also limited by the lack of information about maintenance activities associated with cabling within the site and our lack of understanding of the key and influential species for these four protected features of the site.</p>

Supporting processes	Supporting processes with respect to subtidal mud, subtidal sand, sea-pen and burrowing megafauna communities, and subtidal coarse sediment include hydrodynamic regime and water and sediment quality. There is no evidence to suggest that human activities are having an adverse impact on the typical hydrodynamic regime to which the site is exposed. Whilst it is noted that the Celtic Seas OSPAR region within which the site is located has been assessed to have a poor contaminant status (Larson 2022), this is insufficient evidence to assess water or sediment quality in the site. Overall, there is no evidence to suggest that supporting processes that operate at this site are being impeded with respect to supporting the presence of subtidal sand, subtidal mud and sea-pen and burrowing megafauna communities. JNCC therefore advises a maintain objective on this basis.	Favourable – needs to be maintained	Low - The evidence-base supporting JNCC's assessment against this attribute draws upon data from the wider Celtic Sea Region (Larsen <i>et al.</i> , 2022), rather than any evidence available from within, or in close proximity to. the site itself. This lack of data pertaining to water and sediment quality within this site limits this assessment. Moreover, there is a lack of time series data information about water quality and on how human activities may have impacted this.
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## References

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