Annex B

APPEAL PURSUANT TO SECTION 43(1A) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND REGULATION 4(1) OF THE NATIONAL APPEAL REGULATIONS, 2025 AGAINST ENVIRONMENTAL AUTHORISATION GRANTED TO SHELL OFFSHORE UPSTREAM SOUTH AFRICA B.V. IN RESPECT OF THE PROPOSED OFFSHORE EXPLORATION WELL DRILLING IN LICENSE BLOCK NORTHERN CAPE ULTRA-DEEP, LOCATED OFFSHORE BETWEEN PORT NOLLOTH AND LAMBERTS BAY, WESTERN CAPE (OFF THE WEST COAST OF SOUTH AFRICA).

INTRODUCTION

1. This is an appeal against the environmental authorisation ("EA") granted on 30 June 2025 by the Director-General of the Department of Mineral and Petroleum Resources ("DG") to Shell Offshore Upstream South Africa B.V. ("Shell") in respect of the proposed offshore exploration well drilling in license block Northern Cape Ultra-Deep, located offshore between Port Nolloth and Lamberts Bay, Western Cape ("the Proposed Project").
2. This appeal is made by Natural Justice and The Green Connection (collectively "Appellants"):
    2.1. Natural Justice: Lawyers for Communities and the Environment is a non-profit organisation specialising in environmental and human rights law in Africa – with a focus on the pursuit of social and environmental justice for local and indigenous communities. Natural Justice offers support to local and indigenous communities impacted by the ever-increasing demand for land and natural resources.
    2.2. The Green Connection is a registered non-governmental organisation, that believes that economic growth and development, improvement of socio-economic status and conservation of natural resources can only take place within a commonly understood framework of sustainable development. The Green Connection aims to provide practical support to both the government and non-governmental/civil society sectors, which are an integral part of sustainable development.
3. The Appellants have legal standing to bring the appeal not only in terms of section 43 of the National Environmental Management Act, 107 of 1998 ("NEMA"), but also

to enforce environmental laws in terms of section 32 of NEMA. The Appellants act in the public interest, and in the interest of protecting the environment, to further the objectives of section 24 of the Constitution of the Republic of South Africa, 1996 ("the Constitution") and NEMA.

4. The Appellants contend that the Final Environmental and Social Impact Assessment Report ("Final ESIAR") was fatally flawed, for the reasons set out in this appeal, and cannot serve as a lawful basis for granting the EA. The EA granted by the DG is therefore defective and should be set aside in this appeal. Environmental authorisation should be refused.

5. The Appellants made substantive written submissions during the environmental impact assessment ("EIA") process on the Draft Scoping Report (attached hereto marked "**Annexure B01**") and Draft ESIAR (attached hereto marked "**Annexure B02**"). These written submissions contain the Appellants' detailed comments on and objections to the application, and should be read as specifically incorporated into this appeal.

6. It is recorded that the time available for the Appellants to prepare this appeal (and seek appropriate advice) was impaired by the Final ESIAR not being accessible due to a defective hyperlink. This issue was brought to the environmental assessment practitioner's attention, and the document was subsequently made available to the Appellants' on 18 July 2025. On 23 July 2025, the Appellants submitted a request for an extension of time to submit their appeal, which the Appeal Administrator declined. The Appellants reserve their right to supplement this appeal, and to apply for the necessary condonation.

GROUNDS OF APPEAL

I. THE OIL SPILL MODELLING IS DEFICIENT

7. This appeal ground relates to critical flaws and unjustified assumptions in the Final ESIAR's oil spill modelling that result in a misrepresentation of the risks and impacts of a catastrophic oil spill from the proposed project, in direct violation of NEMA. Specifically, and as raised in Appellants' written comments on the EIA, the Final ESIAR's oil spill models downplayed project risks (including risks to fisheries and the livelihoods of small-scale fishers), relied on a capping solution that *cannot* apply to the proposed project, modelled idealistic and inaccurate spill conditions, and rested on unsupported and unrealistic assumptions. These issues are not just unlawful, they are reckless. By issuing an EA in reliance on this deficient Final ESIAR, the DG has authorized the NCUD project arbitrarily, capriciously, and

without evaluating relevant considerations in violation of PAJA Section 6(2)(e).

The Final ESIAR Unlawfully Failed to Consider the Higher Risks of Drilling in Ultradeep Waters

8. The NCUD exploratory drilling project is both exceptional and unprecedented. The EA authorizes drilling in waters up to 3,200 meters deep; 10 times the height of the Eiffel Tower and only 600 meters above the wreck of the Titanic. If allowed to proceed, the proposed project will be the deepest offshore well in South Africa and the third deepest offshore well *in the world*; in waters just 400 meters shallower than the current world record holder.[1]

9. The EA authorizes drilling in conditions where drilling has never taken place in South Africa before and in an environment less accessible than outer space. The deep sea below 2,500 meters is in perpetual darkness, has water temperatures consistently below 5°C, and pressures greater than 250 atm (the equivalent of a delivery truck pressing down on an area the size of a postage stamp).

10. Because of these extreme conditions, drilling in deep waters is inherently risky. As raised in Appellants' written EIA submissions, drilling in deeper waters raises the risk of accidents due to higher water pressure as well as higher pressure within the oil reservoir. This means a higher likelihood of encountering high pressure/high temperature ("HPHT") formations, such as the one involved in the Deepwater Horizon disaster.[2] The probability of industry-reported serious accidents, fatalities, injuries, explosions, or fires grows by approximately 8.5 percent with every additional 30 meters of depth at which an offshore platform operates.[3] This means that the risk from drilling the deepest well within Block NCUD (3,200m) would be 480% risker than the well at issue in the Deepwater Horizon accident.[4]

11. The exceptional risks and challenges associated with ultra-deep drilling were not presented in the Final ESIAR, and therefore were not taken into consideration by

[1] Upon information and belief, the current deepest offshore well by water depth is the Ondjaba-1 well in Angola at approximately 3,600 meters deep, and the second deepest well by water depth was the Raya-1 in Uruguay. David Wethe & Andrea Jaramillo, *Drilling of world's deepest offshore oil and gas well planned for Colombia this year*, World Oil (Aug. 1, 2024), https://www.worldoil.com/news/2024/8/1/drilling-of-world-s-deepest-offshore-oil-and-gas-well-planned-for-colombia-this-year/; *Total to Drill Deepest Ever Offshore Well Using Maersk Rig*, Offshore Engineer (Jan. 14, 2020), https://www.oedigital.com/news/474583-total-to-drill-deepest-ever-offshore-well-using-maersk-rig.

[2] United States National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, Macondo: The Gulf Oil Disaster : Chief Counsel's Report (2011); F. William M. Pinkston & Peter B. Flemings, *Overpressure at the Macondo Well and its impact on the Deepwater Horizon blowout*, 9, Sci. Rep., 7047 (2019).

[3] Lucija Muehlenbachs, Mark A. Cohen & Todd Gerarden, *The impact of water depth on safety and environmental performance in offshore oil and gas production*, 55, Energy Policy, 699–705 (2013).

[4] The Macondo 252-1 well was in waters 1500 m deep. Earl Boebert & James M. Blossom, Deepwater Horizon: A Systems Analysis of the Macondo Disaster (2016).

the DG. The Final ESIAR never acknowledged the possibility of encountering a HPHT reservoir, and therefore does not adequately describe the special and additional crew training, operational procedures, and equipment that will be required to drill safely within the project area. The Final ESIAR does not explain how it will ensure that drilling equipment, blow out preventer (BOP) devices, cement for well plugging and abandonment, and capping equipment is sufficient to withstand the extreme conditions that will be encountered at the project site. Given the unprecedented nature of drilling at this depth, this technology can be extremely difficult to acquire and may not be suitable to the specific conditions in South African waters.

The Final ESIAR's Oil Spill Models Unlawfully Relied on a Capping Solution that is Inadequate for the Proposed Project

12. The Final ESIAR only modelled a 20-day spill duration,[5] because "20 days is a reasonable and realistic assumption for the installation of a capping stack in the unlikely event of a blow-out."[6] As raised in Appellants' EIA written submissions, this 20-day duration is inaccurate and unsupported. In response to these submissions, the EAP merely reiterated its conclusion that "20 days used for the oil spill modelling is a reasonable and realistic assumption for the installation of a capping stack" without citing any evidence for that conclusion.[7]

13. The 20-day spill duration is not only unsupported, but is neither reasonable nor realistic. This is because, as described below, the Final ESIAR relies on capping technology unsuitable for the depth of the project, does not consider access challenges for the suitable capping technology, conflicts with estimated capping durations for deep-water wells in other jurisdictions, assumes perfect and successful execution of capping, and does not consider the need to drill a relief well.

14. The Final ESIAR indicates that the 20-day spill response duration is based on its plan to use a capping stack located at the Oil Spill Response Limited (OSRL) facility in Saldanha Bay to contain the spill in the event of a well blow-out.[8] However, the capping stack in Saldanha Bay is only rated for pressures of 10,000 psi and waters

[5] Final ESIAR at p. 123.
[6] Final ESIAR, Appendix F at p. 14 ("The performed release duration was 20 days").
[7] Final ESIAR, Appendix Q.7 at p.9.
[8] FINAL ESIAR at p. 123 (The operator motivates that 20 days is a reasonable and realistic assumption for the installation of a capping stack in the unlikely event of a blow-out. … It is relevant that subsea capping and subsea containment equipment (managed by OSRL, a cooperative dedicated to response to marine pollution by hydrocarbons) is installed at Saldanha Bay, South Africa and, therefore, well placed for a rapid response to an unplanned event in Licence Block NCUD.")

up to 3,000 meters deep.[9] The proposed project will take place in waters exceeding 3,000 meters deep with a high likelihood of encountering pressures greater than 10,000 psi. In fact, 15,000 psi-rated capping stacks are considered standard for ultra-deepwater wells.[10] For this reason, the Final ESIAR has failed to explain how the capping stack in Saldanha is sufficient to contain a well-blowout for the proposed project.

15. The Final ESIAR never specified any alternatives to the capping stack at the Saldanha facility. According to the latest International Association of Oil & Gas Producers (IOGP) report on subsea capping technologies, there are only three capping stack systems in the world that are designed for use in waters over 3,000 meters deep, and these are located in the United Kingdom, Singapore, and the United States.[11] None of these capping stacks are managed by Oil Spill Response Limited (OSRL) (which Shell is a member of), and so it is not clear whether Shell will have access to these stacks *at all* in the event of a blow-out, much less whether it will be logistically possible for them to relocate the multi-ton units to South Africa for use at the project site. Regardless, it will likely take much longer than 20 days for Shell to deploy capping stacks from any of these three foreign locations in the event of a spill even under the best-case scenario.

16. Furthermore, the 20-day duration would be inaccurate even if the capping stack in Saldanha were usable. As acknowledged by the EAP, the same 20-day figure has been used for many offshore projects in South Africa[12] that were located in much shallower depths and much closer to shore. For example, Total used the same 20-day timeframe for predicting time to cap a blowout for Total's offshore oil and gas production project in Block 11B/12B, even though the project is located at significantly shallower depths (up to only 2,300 m as opposed to 3,200 m) and is located significantly closer to shore (120 km as opposed to 300 km).

17. The 20-day spill duration stands in stark contrast to oil spill modelling conducted for projects in other jurisdictions in shallower water and under *less risky* conditions. For example, Chevron's Anchor Project estimated a worst-case spill duration of 177 days to mobilize a rig, drill a relief well, and conduct kill operations for

[9] *OSRL Introduces International Well Capping Equipment at New South African Facility*, Offshore Technology, https://www.offshore-technology.com/contractors/environmental/oil-spill-response/pressreleases/press-international-well-capping-equipment/.
[10] David Nickerson, *Technology scaled for any response*, World Oil 49-52 (Jan. 2021), available at: https://marinewellcontainment.com/wp-content/uploads/WO0121-Nickerson_SFOffshoreSafety_MarineWell.pdf.
[11] IOGP, *Subsea Capping Stack Design and Operability Assessment*, Report 595 (Feb. 2020) at pp. 34, 35.
[12] Final ESIAR, Appendix Q.7 at p. 9 ("The use of 20 days is in line with other recent modelling studies undertaken off the coast of South Africa.").

exploration wells located only at roughly 1,500 meter water depths in the Gulf of Mexico.[13]

18. The deepest exploratory drilling project Shell has ever completed is its Perdido oil platform in the Gulf of Mexico, at 2,450 meters. For this project, Shell estimated and modelled a worst-case spill duration of 100 days.[14] Shell has failed to explain or justify how a drilling project that is *deeper* and *further* away from available spill response equipment would be contained over *five times faster* than what it has predicted for its other projects.

19. The 20-day spill duration also assumes that capping will be completely successful at containing a spill. However, this means that the Final ESIAR completely fails to consider a scenario where the capping system fails, which could occur if the wellhead is crooked (inclined so the capping stack cannot fit properly); the flow of oil from the well causes uplift and instability of the capping stack; and/or the wellhead is damaged due to debris, inhibiting the seal to the capping system.[15]

20. Additionally, capping is only a "temporary solution,"[16] designed to afford the operator the time to drill a relief well in order to fully address a blow-out. If a capping stack is applied without a relief well, the pressure buildup inside the wellbore can lead to seafloor fractures and additional spills, aggravating impacts.[17] The Final ESIAR does not specify its relief well procedures. In fact, it never even acknowledges that a relief well would be necessary.

21. Because of its reliance on a 20-day spill scenario, the Final ESIAR's oil spill modelling significantly underestimates the size and scope of a major oil spill from the project. As a result, the Final ESIAR's impact assessments based on these model results are similarly flawed. Because the Final ESIAR modelled an unjustifiably and unrealistically short oil spill, the EA was issued on the basis of incomplete and inaccurate information on oil spill impacts.

The Final ESIAR Models Adopted Idealistic and Inaccurate Conditions, and Thus Failed to Model the Reasonable Worst-Case Scenario

22. The Final ESIAR modelled oil spills at inaccurate depths, based on an arbitrarily low oil flow rate, and under simplified currents.

23. As highlighted in Appellants' EIA written submissions, the Final ESIAR failed to

[13] 2020 Chevron Anchor Development Operations Coordination Document (DOCD) at PDF p. 16.
[14] 2021 Shell Perdido Development Operations Coordination Document (DOCD) at p. 21.
[15] IOGP, *Subsea Capping Stack Design and Operability Assessment*, Report 595 (Feb. 2020) at p. 19.
[16] *Capping*, OSRL, https://visual360.no/osrl/concepts/capping/.
[17] Elnoamany et al., *Blowout-Capping-Fracturing-Relief Well: A Full Cycle Workflow*, 29 SPE J. 780, available at: https://onepetro.org/SJ/article-abstract/29/02/780/535712/Blowout-Capping-Fracturing-Relief-Well-A-Full?redirectedFrom=fulltext.

model oil spills at the depths at which spills could reasonably take place. The Final ESIAR modelled oil spills at just two locations: one at 2,200 meters deep and one at 3,000 meters deep. It stated that these locations "were selected to represent the depth range of the License Block."[18] However, according to the Final ESIAR, License Block NCUD is located "in water depths ranging from 2500 to 3200 m deep."[19] Therefore, half of the Final ESIAR's oil spill models were for a well location that is 300 meters *shallower* than any drilling that will occur under the EA. The other half of the Final ESIAR's models are for a location that does not represent the deepest possible drilling location, and therefore does not reflect the worst-case spill scenario.

24. The EAP failed to adequately address this comment, and stated that "[d]espite there being other locations within the licence area that are deeper, these modelling points are deemed representative (or reasonable/representative worst case) of the different scenarios that may occur in the area of interest" without further justification.[20]

25. The Final ESIAR's models also adopted a highly optimistic and unjustifiably low flow rate. The proposed exploration wells are not only located in ultra-deep waters (2,500 to 3,200 meters), but would also extend up to another 4,570 meters beneath the seafloor.[21] At this depth (up to 7,770 meters below sea level), oil and gas formations are under enormous pressures.

26. The Final ESIAR's model simulated a blow-out rate of 3,180 m3/day (20,000 bbls/day), based on "a worse case discharge study of a comparable well in Namibia."[22] The Final ESIAR never specified the comparable well in Namibia, and it is unclear whether this well was located at a comparable depth and in comparable conditions. The flow rate used by the Final ESIAR is many times smaller than what is typically expected from a well blowout in an ultra-deep oil and gas formation. For example, the exploratory well involved in the Deepwater Horizon catastrophic spill was in waters 1,500 meters deep, and the well reached only another 4,072 meters before an explosion on the rig caused a well blowout. Although shallower than the proposed wells in NCUD, the flow rates for the Deepwater Horizon spill reached up to 70,000 bbls/day[23]– 3.5 times higher than the flow rate used in the Final ESIAR for the NCUD project. More recently, researchers with Schlumberger (a global energy company) that operates in ultra-deep formations, predicted that at the end of day one during a worst case blowout from an ultradeep well, the wellbore flowing

[18] Final ESIAR at p. 425.
[19] Final ESIAR at p. xii.
[20] Final ESIAR, Appendix Q.7 at pp. 3-4.
[21] Final ESIAR at p. viii.
[22] Final ESIAR, Appendix F at p. 14.
[23] McNutt, M. K. et al., *Review of flow rate estimates of the Deepwater Horizon oil spill*, 109 Proceedings of the National Academy of Sciences 20260-20267 (2012).

bottom hole pressure is 18,000 pounds per square inch and the oil flow rate is 237,000 bbls/day[24] – more than 10 times higher than the flow rate used in the Final ESIAR for the NCUD project**.** An assumed flow rate of only 20,000 bbls/day therefore does not represent a worst case scenario, and the DG thus authorized the project on the basis of incomplete and inaccurate information, in violation of PAJA.

27. The Final ESIAR also only modelled oil dispersal from surface currents, completely failing to analyse how oil could spread due to sub-surface currents. Modelling the probabilities of surface oil presence is entirely irrelevant to how a worst-case oil spill would impact marine life on the seafloor. This modelling is especially important for the proposed project, since it specifies the use of dispersants in the event of a spill and dispersants will increase the amount of oil that sinks. Subsurface currents, which would transport spilled oil that sinks, can frequently travel in directions different from and even opposite of surface currents. As explained in Appellants' EIA written submissions, these subsurface currents can significantly increase the risk of spills reaching the coastline. In response, the EAP recognized that these subsurface, submesoscale processes "are increasingly recognized for their importance in shaping ocean dynamics and to influence cross-shelf transport", but justified their failure to model these processes because "it is challenging to achieve their resolution in large domain simulated for long periods as in this study."[25] If modelling these currents was not possible, this uncertainty should have been recognized by the Final ESIAR's oil spill analysis and incorporated into its assessments of oil spill impacts on the marine environment, fisheries, and communities. Instead, the Final ESIAR repeatedly insisted that its models found "no shoreline oiling" despite this critical source of uncertainty.[26]

The Final ESIAR's Oil Spill Analysis rested on Unsupported and Unrealistic Assumptions

28. The Final ESIAR's models assumed a spill of only light oil and assumed an arbitrarily low risk of a major oil spill.

29. The Final ESIAR only modelled a spill of "light oil" (43° API), which it stated is "expected for Block NCUD based on oil discovered in Namibia."[27] This assumption significantly reduced predicted oil spill impacts, as the Final ESIAR states that light oil "evaporates and disperses easily and is expected to be effectively degraded by the bacteria naturally present in seawater."[28] The Final ESIAR provides no data to

[24] Yuan, Z., Hashemian, Y., & Morrell, D, *Ultra-deepwater blowout well control analysis under worst case blowout scenario*, 27 Journal of Natural Gas Science and Engineering 122-129 (2015).
[25] Final ESIAR, Appendix Q.7 at p. 9.
[26] *See, e.g.,* Final ESIAR at pp. xxvi, 15, 17, 130, 135, 422, 426, 431, 441, 446, 455, 543
[27] Final ESIAR, Appendix F at p. 34.
[28] Final ESIAR, Appendix F at p. 5.

support that light oil is the most likely type of oil to be found in the source, much less the *only* type of oil that may be spilled. In fact, a Final ESIAR for a drilling project in the neighbouring Deep Water Orange Basin (DWOB) block modelled a spill based on *medium* crude oil (28-31° API), which it stated was an analogue to "hydrocarbons in the Santonian layer, like in the nearby Graff exploration well drilled in Namibia … which oil is heavier."[29] Industry best practices recommend modelling multiple plausible crude oil types, including heavier oils,[30] as exploration wells sometimes unexpectedly strike different oil types.

30. The Final ESIAR also minimizes the risk of a well blow-out as "extremely low", citing an IOGP report which "indicates that frequency of a blow-out from normal exploration wells is in the order of 1.4×10^{-4} per well drilled."[31] However, the Final ESIAR arbitrarily cites the blowout frequency for appraisal well operations (including gas wells) of "North Sea Standard."[32] This statistic does not include blow-out or well release rates for ultradeep projects, which are not "normal". According to the U.S. Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE), blowout incident rates for high pressure and high temperature wells are about six times higher than for normal wells.[33] Given the unprecedented nature of this project, there is simply too much uncertainty to conclude that the risk of a spill is unlikely.

31. For the reasons set out in this section above, the Minister is respectively requested to exercise his powers in terms of section 43(6) of NEMA and set aside the environmental authorisation.

II. FAILURE TO INCLUDE OIL SPILL CONTINGENCY PLAN AND BLOWOUT CONTINGENCY PLAN IN FINAL ESIAR

32. This appeal ground relates to the failure to include the Blow Out Contingency Plan ("BOCP") or the Oil Spill Contingency Plan ("OSCP") for the Proposed Project in the Final ESIAR.

33. The Final ESIAR describes the BOCP as focussing well control operations and 'will set out the detailed response plan and intervention strategy to be implemented in

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[29] SLR, *ESIA for Exploration Well Drilling in Block Deep Water Orange Basin off the West Coast of South Africa* (July, 2023), Appendix 8 at p. 39.
[30] U.S. Bureau of Ocean Energy Management, Information Requirements for Exploration Plans, Development and Production Plans, and Development Operations Coordination Documents on the OCS for Worst Case Discharge and Blowout Scenarios, Notice to Lessees NTL 2015 N0-1.
[31] Final ESIAR at p. 96; Final ESIAR, Appendix Q.7 at p. 9.
[32] IOGP, *Blowout Frequencies*, Report 434-02 (Sep. 2019) at p. 9.
[33] U.S. Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE), *Oil Spill Response Plan (OSRP) Equipment Capabilities Review*, BPA No. E14PB00072, Task 1: Worst Case Discharge Analysis (Volume I) (February 19, 2016).

the event of a blow-out.'[34]

34. The Final ESIAR describes the primary objective of the OSCP as being "to identify all possible spill scenarios, level of response requirements and set in motion the necessary actions to stop any discharge of oil and to minimise its effects."[35] Among other things, it also: outlines the system for command and control of the oil spill response operations and organisation; provides strategy and tactics to respond to the different types and levels of oil spills using local and international resources; and includes oiled wildlife emergency response measures. The OSCP thus provides for 'a comprehensive response to all oil and chemical pollution emergencies in the marine environment.'[36]

35. Together, the OSCP and BOCP set out Shell's plans for how it will respond to a well blowout and oil spill.

36. While the Oil Spill Modelling Report states that '*the input data for the oil response (oil spill contingency plan, OSCP) was provided by Shell'*,[37] the Final ESIAR indicates that *'[a]n OSCP will be prepared for each drilling campaign for approval by SAMSA, PASA and DFFE. Since the inputs (e.g. location, type of resource, season, contractor, response services) to the OSCP are unique and specific to each drilling campaign, the specific content of this plan can only be prepared once the drilling unit contractor has been appointed and the well proposal has been finalised (see Section 11.3.1). Drilling cannot commence until the OSCP has been approved by SAMSA, DFFE and PASA.'*[38]

37. The Final ESIAR instead includes a 'Structure of a Standard Shell Oil Spill Contingency Plan',[39] while an example of a 'typical Shell Oil Spill Contingency Plan' was made available on the EAP's website. Neither provide any actual content.

38. Thus the OSCP and BOCP were:

    38.1. not prepared for the Final ESIAR and were not available to the DG;

    38.2. not available as part of the public participation process for the Proposed Project; and

    38.3. not available to the DG when the EA decision was taken.

39. The DG's decision on authorisation does not give any consideration to the OSCP, the BOCP, or their absence.

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[34] Final ESIAR at p. 516.
[35] Final ESIAR at p. 516
[36] Final ESIAR at pp. 516-517.
[37] Final ESIAR, Appendix F at p. 15.
[38] Final ESIAR at p. 516.
[39] Final ESIAR at p. 519.

40. One of the foundational principles of NEMA is that the participation of all interested and affected parties must be promoted and the participation of disadvantaged people must be ensured.[40] Public participation must provide interested and affected parties with a reasonable opportunity to influence the outcome of the decision at hand.[41] Section 24(4)(a)(v) of NEMA provides that interested and affected parties must be given a reasonable opportunity to participate in the environmental impact assessment process.

41. As set out above, the OSCP and BOCP are the documents which will define Shell's plans to manage and mitigate a well blowout and oil spill caused by the Proposed Project. These plans are essential mitigation measures, the details of which are necessary to inform the impact assessment. Instead, as discussed above, the Final ESIAR assumed successful implementation of these measures without detailing the specific equipment that will be available (including any offshore drilling equipment should a relief well need to be drilled), as well as the logistics informing actual response time, such as – but not limited to - transport or shipping requirements for the capping stack mobilisation scenarios, implications of attempting to install a capping stack at a deep sea location in potentially adverse and challenging weather conditions, implications of having to drill a relief well, and associated time requirements for all scenarios. The response is integrally connected to the mitigation of this impact.

42. Section 24(4)(b)(ii) of NEMA provides that the environmental impact assessment process must include an investigation of the mitigation measures to keep adverse impact to a minimum.

43. Accordingly, the environmental impact assessment process for the Proposed Project ought to have included public participation in respect of the BOCP and OSCP. However, interested and affected parties were not afforded a reasonable opportunity to participate in the assessment of the impacts (and mitigation measures) in respect of a blowout and oil spill caused by the Proposed Project. Therefore, there has not been a proper public participation process.

44. In the absence of mechanism to cater for public participation in the OSCP, the fact that a generic plan was made available does not establish that a reasonable public participation process has been followed.

45. To the extent that the OSCP and BOCP are significantly influenced by the location of the wells to be drilled and it would be impractical and overly burdensome to prepare these plans based on preliminary locations and then revise them for the final location, delay in preparing the OSCP and BOCP could only be done reasonably and lawfully if some mechanism was created to allow for public

[40] NEMA, section 2(4)(f). *See also*: Regulation 41(6) of the EIA Regulations.
[41] *Doctors for Life International v Speaker of the National Assembly* 2006 (6) SA 416 (CC), para. 171.

participation in respect of those documents. This was not done. In fact, the Final ESIAR specifies that the BOCP may never be made available to either the public or the Minister, as it is subject only to approval "by Shell".[42]

46. Public participation in the OSCP and BOCP are especially necessary given Shell's track record of failing to adequately respond to and remediate oil spills caused by its projects in Africa, which have contributed to devastating economic and human health impacts for local communities. According to the United Nations, at least 13 million barrels of crude oil have been spilled since 1958 in at least 7,000 incidents in the Niger Delta region, where Shell is the largest private oil and gas company.[43] A 2011 United Nations Environment Programme (UNEP) report documented the contamination of soil, groundwater, fisheries, and agricultural land; the poisoning of drinking water; and the exposure of hundreds of thousands of people to serious health risks from oil pollution in Ogoniland, Nigeria.[44] Clean-up has suffered from corruption and other issues, and local communities are still living with the devastating impact of oil pollution.[45]

47. Therefore the decision on authorisation was procedurally unfair and did not comply with sections 24(4)(a)(v) of NEMA and the relevant provisions of the EIA Regulations,[46] and would be vulnerable to being reviewed and set aside in terms of sections 6(2)(b), 6(2)(c), 6(2)(d), 6(2)(e)(iii) and 6(2)(f)(ii)(cc) of PAJA. Accordingly, the appellants' respectively request the Minister to exercise his powers in terms of section 43(6) of NEMA and set aside the environmental authorisation.

III. FLAWED ANALYSIS OF CUMULATIVE IMPACTS

48. Block NCUD lies within the West Coast of South Africa, where applications for gas and oil exploration well drilling have been approved in the Deep Water Orange Basin (DWOB) block adjacent to Licence Block NCUD, as well as in Block 5/6/7 and Block 3B/4B. Up to 20 exploration well drillings have been authorised in respect of the three applications adjacent to Block NCUD. The Final ESIAR acknowledges the possibility of future exploration in nearby blocks.[47] Beyond exploration, there is the intended realisation of production in Block NCUD if a significant discovery is made. The same holds true in other blocks adjacent to Block NCUD in both South African

[42] Final ESIAR at p. 516.
[43] Simi Jolaoso, *Oil clean-up 'scam' warnings ignored by Shell, whistleblower tells BBC*, BBC News (Feb. 11, 2025), https://www.bbc.com/news/articles/c0rqe85q1jno [hereinafter Jolaoso, Oil clean-up 'scam' warnings].
[44] UNEP, *Environmental assessment of Ogoniland* (2011), https://wedocs.unep.org/20.500.11822/7947.
[45] Jolaoso, Oil clean-up 'scam' warnings.
[46] GNR982 of 4 December 2014 (as amended).
[47] Final ESIAR, section 8.8.2.

and Namibian waters, meaning that the area could continue on a path to high offshore oil and gas industrialisation.

49. NEMA, together with the EIA Regulations, requires that EIAs include, amongst other things, an assessment of the nature, extent, duration and significance of the consequences for or the impacts on the environment of that activity, including the cumulative impacts.

50. There is a need for a more proactive, precautionary, and integrated approach to understanding cumulative effects. As the ICJ stated in its advisory opinion on climate change: “States must assess the possible cumulative effects of their acts and the planned activities under their jurisdiction or control. Although such ‘activities may not be environmentally significant if taken in isolation, . . . they may produce significant effects if evaluated in interaction with other activities’”.[48] While the Final ESIAR acknowledges the challenges of assessing cumulative impacts, it proposes limiting the analysis to what can be evaluated "meaningfully," potentially overlooking significant environmental risks.[49] This is unacceptable.

Uncertainty Is Not a Valid Reason to Avoid Analysis

51. While the Final ESIAR argues that the lack of geological information prevents a meaningful assessment of future exploration and production activities, this does not justify ignoring cumulative impacts.[50] Environmental impact assessments (EIAs) should be built on the principle of precaution, where uncertainty is acknowledged but does not preclude the identification and management of potential risks. Indeed the ICJ Advisory Opinion stated “that the precautionary approach or principle, where applicable, guides States in the determination of the required standard of conduct in fulfilling their customary duty to prevent significant harm.”[51] Relying on the assertion that future activities cannot be reasonably defined due to the speculative nature of future resource discovery is not an excuse to forgo evaluating potential cumulative impacts. It is essential to consider a range of scenarios, including worst-case scenarios, even if specific outcomes remain uncertain.

52. The Final ESIAR proposes deferring a detailed cumulative impact assessment to future stages of development, especially once petroleum resources are identified. This approach is flawed because it allows potentially significant environmental impacts to be addressed only after the exploration phase has already occurred. By postponing the evaluation of potential impacts, this approach risks underestimating the long-term effects of exploration and related activities, making

[48] ICJ climate change Advisory Opinion, para. 276, citing, (Climate Change, Advisory Opinion, ITLOS Reports 2024, p. 128, para. 365).
[49] Final ESIAR, section 8.8.1.
[50] Final ESIAR, section 8.8.1.
[51] ICJ climate change Advisory Opinion, para. 294.

it difficult to design effective mitigation measures once the project is underway. Early, proactive assessment is critical to understanding the full scope of cumulative impacts.

Failure to Assess Cumulative Climate Impacts

53. The expansion of oil and gas drilling operations in South Africa will have predictable and dire climate change impacts, particularly should these projects move to production. It is imperative for the government to understand the worst-case cumulative greenhouse gas (GHG) implications of these projects should they proceed to production in order to assess whether the vast expansion of oil and gas production is consistent with South Africa's obligations to prevent climate harms, as recently clarified by the ICJ Advisory Opinion.

54. Uncertainty concerning whether every project will reach production stage and how much oil and gas could be produced is not a reasonable excuse to withhold this important analysis.

55. The proposed drilling activities, if additional commercially viable resources are identified and developed through to production phase, will inevitably add to South Africa's overall GHG emissions. As such, climate change a reasonably foreseeable future impact especially in combination with impacts arising from similar offshore oil and gas exploration and production activities. The cumulative impacts of such GHG emissions need to be identified and assessed. In a country where effectively no oil and gas is being produced, the introduction of these many projects could have an outstanding influence on South Africa's carbon budget, potentially far exceeding its Nationally Determined Contribution (NDC) targets. There is no adequate reason for why this type of cumulative GHG assessment was not done, and approving each project without this cumulative impact assessment is unreasonable and contrary to the requirements of NEMA.

56. The expert report of Drs. Mark New and Lawrence Meckel (attached hereto marked "**Annexure B03**"), provide a clear and relatively straightforward methodology to transparently estimate hydrocarbon volumes that might possibly be produced by a series of commercially-viable oil and gas projects in the future and the associated greenhouse gas (GHG) emissions from those projects. Drs. New and Meckel opine:

    56.1. Information on GHG emissions from exploitation of future, yet to discovered, oil and gas reserves in South Africa can (and should) be used in support of development of the country's NDC for reducing greenhouse gas emissions, as required by the Paris Agreement of the UNFCCC;

    56.2. Estimation of yet to be discovered, commercially viable, oil and gas reserves for South Africa is possible, using well established methodologies. These

estimates carry large uncertainties, but can usefully be applied to determine likely upper and lower limits for these resources;

56.3. Well established emission factors, which determine the CO2-equivalent greenhouse gas emissions from use of oil and gas for different purposes, can be used to calculate the emissions that would be emitted from exploitation and use of yet to be discovered oil and gas reserves; and

56.4. The South African government should develop a system, using the methods described in their report, to estimate the CO2-eq emissions from its national yet to be discovered reserves.

Failure to assess cumulative oil spill and marine impacts

57. Despite the high volume of past, current, and potentially future oil and gas exploration activities in the region, the Final ESIAR fails to comprehensively assess the cumulative marine impacts of the project in conjunction with other activity the area and does not assess all "past, present and reasonably foreseeable future developments or impacts". The Final ESIAR expressly declines to assess the full scope of cumulative environmental impacts that could arise from further exploration or production activities in the area (including cumulative impacts on fisheries and the livelihoods of small-scale fishers). Instead, the Final ESIAR limits its analysis to what can be evaluated "meaningfully," potentially overlooking significant environmental risks.[71]

58. The proposed exploration activities are likely to lead to full-scale production activities, all of which would contribute great risk to the marine environment. Similarly, it is reasonably foreseeable that proposed or approved seismic surveys (TGS Orange Basin Reconnaissance Permit); exploration (Deep Water Orange Basin Licence Block 12/3/343; TotalEnergies EP South Africa Block 567; Sezigyn ER340; PEL39 in Namibian waters); and production (Sunbird and PetroSA Block 2A) could contribute, along with the proposed exploration, to additive stressors on marine life in the region. Inshore to NCUD in the Orange Basin, Eco (Atlantic) Oil & Gas has already commenced with exploratory drilling in Block 2B (as of October 2022).[72] The compounding effects of all these projects on the marine environment were not fully evaluated in the Final ESIAR.

59. For the reasons set out in this section above, the Minister is respectfully requested to exercise his powers in terms of section 43(6) of NEMA and set aside the environmental authorisation.

IV. INADEQUATE ASSESSMENT OF BIODIVERSITY / MARINE IMPACTS

60. NEMA regulations require the assessment of harms to the marine environment

generated by the proposed project, mandating that "[a]n environmental impact assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application [for environmental authorisation], and must include … an assessment of each identified potentially significant impact and risk, including … cumulative impacts [and] the nature, significance and consequences of the impact and risk."[52] Under NEMA, an environmental impact assessment must also include an "investigation of mitigation measures to keep adverse consequences or impacts to a minimum."[53] Under PAJA, a court may judicially review the grant of an environmental authorization if the action was taken because "relevant considerations were not considered", among other provisions.[54]

61. The Final ESIAR's assessment of the project impacts on marine species fails to meet this standard in several ways:

    61.1. The Final ESIAR lacks sufficient baseline data to evaluate environmental impacts.

    61.2. The Final ESIAR does not adequately describe the potential impacts of oil spills on marine biodiversity.

    61.3. The Final ESIAR's conclusions regarding marine impacts are contrary to available evidence.

The Final ESIAR lacks sufficient baseline data to evaluate environmental impacts.

62. Appropriate and up-to-date scientific information should be available to inform a comprehensive assessment of impacts before a decision can be made whether to authorise a harmful activity. A comprehensive and accurate assessment of the potential impacts requires a robust understanding of the current state and potential stressors. Without a thorough understanding of the current state and potential sensitivities of marine ecosystems, it is not possible to evaluate the significance of future impacts or to accurately assess cumulative environmental effects.

63. Section 2(4)(a)(vii) of NEMA provides that sustainable development requires the consideration of all relevant factors, including "that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions". In *WWF South Africa v Minister of Agriculture, Forestry and Fisheries and others* (para 104), the court found that "[p]otential errors are 'weighted in favour of environmental protection', the object being 'to safeguard ecological space or environmental room for manoeuvre."

[52] NEMA EIA Regulations at Appendix 3(3)(j).
[53] NEMA Section 24(4)(b).
[54] PAJA at Section 6(2)(e).

64. The precautionary approach is applicable when weighing available information during both exploration and production phases, as confirmed by the court in *Sustaining the Wild Coast NPC and others v Minister of Mineral Resources and others*.[55]

65. Despite acknowledging that "[a]n understanding of the environmental and social context and sensitivity within which the proposed project activities would be located is important to understanding the potential impacts," the project proponents did not conduct any field surveys within the block or consider any site-specific environmental or biological information on the seafloor ecosystems within the NCUD area. Instead, the Final ESIAR referenced data collected for other projects[56] in order to draw assumptions about the impacts of the NCUD project.

66. The Final ESIAR contains no data on the benthic (seafloor) fauna in the project area, noting that "[i]nformation on the benthic fauna of the lower continental slope and abyss (beyond 1800 m depth) is largely lacking due to limited opportunities for sampling."[57] Instead, the Final ESIAR cites benthic sampling from a separate project area in much shallower, Namibian waters. The Final ESIAR acknowledges that, as a result of this failure to conduct a baseline assessment, "the presence of [Vulnerable Marine Ecosystems] and associated species within the Licence Block cannot be ruled out."[58] Therefore, the Final ESIAR does not follow internationally accepted practices for biological baseline assessments, which require a thorough assessment of the existing biological community that could be impacted by a project.[59] Nor does it abide by the precautionary principle, which would require proceeding with extra caution due to the risk that the vulnerable marine ecosystems and associated species could form part of the baseline.

67. Similarly, the Final ESIAR includes little baseline information on several other sensitive and ecologically important species, including cetaceans[60] and demersal and cartilaginous fish.[61] However, the Final ESIAR still concluded that impacts to

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[55] *Sustaining the Wild Coast NPC and Others v Minister of Mineral Resources and Others* (3491/2021) [2022] ZAECMKHC 55.

[56] Final ESIAR at p. 144 ("Measurements from adjacent blocks indicate that near-surface currents in Licence Block NCUD are likely primarily from the south-southeast…"); *Id.* at p. 146 ("Based on measurements from blocks north of Licence Block NCUD, the majority of waves originate from the south to south-southwest direction…"); *Id.* At p. 147(referencing surveys conducted for an offshore block in the Namibian EEZ, and concluding that "similarly low nutrient concentrations are expected within Licence Block NCUD").

[57] Final ESIAR at p. 156. Notably, although the project proponents find opportunities in accessing ROVs limited for baseline assessment, they include pre-drilling operational and seabed ROV surveys at the well sites. See, e.g., id. at 319, 323, 370.

[58] Final ESIAR at p. 162

[59] Ted Gullison et al., *Good Practices for the Collection of Biodiversity Baseline Data* (July, 2015), https://doi.org/10.18235/0006516

[60] Final ESIAR at p. 183.

[61] Final ESIAR at p. 158.

these species groups would be "Low" or "Very Low" despite this significant uncertainty.[62]

68. As highlighted by Appellants' EIA submission, the Final ESIAR also failed to adequately quantify baseline ambient sound levels. Instead, it made broad assumptions about ambient noise conditions without making any effort to understand actual noise levels at the project site. The baseline noise level has significant implications for harms to marine animals from underwater noise; with larger harms expected in naturally quieter environments. Yet the Final ESIAR arbitrarily limits itself only to what it could assess through only "desktop-based impact identification methods."[63]

The Final ESIAR does not adequately describe the potential impacts of oil spills to local marine biodiversity.

69. The Southern Benguela is South Africa's most productive ecoregion[64] due to the influence of the cold, equatorward-flowing Benguela Current and the large-scale intensive upwelling of nutrient rich water.[65] The Final ESIAR recognizes how upwelling supports a highly productive pelagic community in the vicinity of the proposed project, stating: "During upwelling the comparatively nutrient-poor surface waters are displaced by enriched deepwater, supporting substantial seasonal primary phytoplankton production. … This, in turn, serves as the basis for a rich food chain up through zooplankton, pelagic baitfish (anchovy, pilchard, round-herring and others), to predatory fish (hake and snoek) mammals (primarily seals and dolphins) and seabirds (jackass penguins, cormorants, pelicans, terns and others)."[66] Oil exposure is known to be lethal to plankton communities, fish (including eggs dispersing in the water column), birds, and marine mammals.

70. As discussed in Section I of this appeal above, the flaws in the Final ESIAR's oil spill analysis all contribute to an underestimation of the size, scope, duration, and toxicity of a well blow-out spill. Since the Final ESIAR's assessment of the impacts of a major spill to marine biodiversity rested on this flawed analysis, this assessment likewise underestimates impacts in violation of NEMA.

71. Additionally, the Final ESIAR failed to assess the toxic effects of dispersants and inadequately described the risk of irreparable harm to vulnerable deep-sea ecosystems.

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[62] Final ESIAR at pp. xxxi-xxxiv.
[63] Final ESIAR at p. 15.
[64] Sink KJ, et al., *Chapter 3: Marine Ecosystem Classification and Mapping*, *in* South African National Biodiversity Assessment 2018 Technical Report Volume 4: Marine Realm (2019), available at: http://hdl.handle.net/20.500.12143/6372.
[65] Shannon, L. V., *The Benguela ecosystem I: evolution of the Benguela, physical features and Processes*, 23 Oceanogr. Mar. Biol. Ann. Rev. 105-182 (1985).
[66] Final ESIAR at p. 147.

72. In the event of a major spill, the Final ESIAR provides for the "[u]se of low toxicity dispersants that rapidly dilute to concentrations below most acute toxicity thresholds."[67] The use of dispersants can further increase the toxicity of oil and/or result in sublethal effects, including bioaccumulation of polycyclic aromatic hydrocarbons (PAHs) in marine food webs.[68] The Final ESIAR includes several pages describing the different ways in which oil and dispersants have been shown to negatively impact individual groups of marine fauna (i.e, plankton, benthic biota, sandy shores, rocky shores, fish, seabirds, turtles, seals, cetaceans).[69]

73. While dispersants alone can have low toxicity, the larger concern is the combination of oil and dispersants. In combination with crude oil, dispersants can increase the overall toxicity and absorption of oil by organisms.[70] However, the Final ESIAR never evaluates the potential ecological impacts of oil plus dispersants, particularly on nearby marine protected areas and Ecologically or Biologically Significant Areas (EBSAs).

74. Given the toxic effects associated with dispersant use, the Final ESIAR should have explained why dispersants were selected as a mitigation measure, as well as how they would contribute to impacts being reduced to "HIGH" significance when the evidence indicates that they could actually serve to aggravate impacts, beyond merely asserting that "low-toxicity" dispersants would be used.[71]

75. The Final ESIAR also fails to describe the potentially devastating consequences of an oil spill to sensitive seafloor ecosystems. Given the NCUD license block's location in offshore ocean depths of 2,500 - 3,200 meters, the deep sea environment of the project area likely includes unique habitats of colony-forming species, such as deep-sea corals, which are characterized as vulnerable marine ecosystem (VME) indicator fauna.[72] The Final ESIA recognizes that many other unique organisms and VME fauna live at these depths and are likely to be found within the NCUD block, including sponges (Porifer), sea pens (Pennatulacea), erect bryozoans (Bryozoa), sea lilies (Crinoidea), basket stars (Ophiuroidea), annelids (Serpulidae), sea squirts (Ascidiacea), and tube-dwelling sea anemones (Ceriantharia).[73]

76. These deep-sea organisms are typically slow growing and long lived (some deep-

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[67] Final ESIAR at p. 446.
[68] [Cited in the Final ESIAR] Almeda, R., Wambaugh et al., *Interactions between zooplankton and crude oil: toxic effects and bioaccumulation of polycyclic aromatic hydrocarbons*. 8 PloS one e67212 (2013).
[69] *See* Final ESIAR at pp. 435-444.
[70] *See* James Wise & John Wise Sr., *A review of the toxicity of chemical dispersants*, 26 Rev. Environ. Health 281 (2011), https://doi.org/10.1515/reveh.2011.035.
[71] Final ESIAR at p. 423.
[72] *International Guidelines for the Management of Deep-Sea Fisheries in the High Seas*, FAO, available at: https://www.fao.org/in-action/vulnerable-marine-ecosystems/background/deep-sea-guidelines/ru/
[73] Final ESIAR at pp. 156-157.

sea corals are thousands of years old),[74] which makes them highly vulnerable to disturbance. A major oil spill would cause long-term, and likely irreparable damage to these ecological communities. For example, studies from the Deepwater Horizon oil spill have found significant long-term damage to benthic ecosystems. Seven years after the spill, corals that were only moderately impacted by oil still had not recovered, and corals at the site were exhibiting abnormal branch loss.[75] Surveys in 2023 revealed little had changed even 13 years after the spill, with coral colonies still not showing visible signs of recovery, leading the author to conclude: "These results highlight the low resilience of deep-sea corals and their value as biological indicators to detect impact to the deep sea."[76]

The Final ESIAR's conclusions regarding marine impacts are contrary to available evidence.

77. The Final ESIAR describes risks of varying significance for different types of species. For example, the Final ESIAR describes potentially severe impacts on plankton,[77] more moderate impacts on benthic species,[78] long-term impacts on sandy shore environments,[79] and the potential for extremely high impacts on seabirds, sea turtles, and seals.[80]

78. The Final ESIAR also acknowledges substantial uncertainty characterizing many aspects of its marine ecological assessment, including a lack of baseline data,[81] lack of research,[82] and even a lack of operational details.[83]

79. Further, as highlighted by Appellants in their comments on the Draft ESIAR, the

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[74] *Deep-Sea Coral Habitat*, NOAA Fisheries, https://www.fisheries.noaa.gov/national/habitat-conservation/deep-sea-coral-habitat#challenges-for-deep-sea-coral-habitat.

[75] Fanny Girard & Charles R. Fisher, *Long-term impact of the Deepwater Horizon oil spill on deep-sea corals detected after seven years of monitoring*, 225 Biological Conservation 117 (Sep. 2018), https://doi.org/10.1016/j.biocon.2018.06.028.

[76] Fanny Girard, Update on deep-sea corals impacted by the 2010 Deepwater Horizon oil spill: long-term recovery processes and growth 13 years after the spill, American Geophysical Union, Ocean Sciences Meeting (February 2024), available at: https://ui.adsabs.harvard.edu/abs/2024AGUOSDS23A..08G/abstract.

[77] Final ESIAR at p. 439.

[78] Final ESIAR at pp. 439-440.

[79] Final ESIAR at pp. 440-441.

[80] Final ESIAR at pp. 442-444.

[81] See Section IV above.

[82] *See, e.g.,* Final ESIAR at p. 31 ("there are few studies that have examined the impacts of hydrocarbon infrastructure and well drilling on deepwater benthic communities in southern Africa."); Final ESIAR, Appendix J at p. 74 ("Offshore areas and deeper waters have been poorly studied"); Final ESIAR, Appendix J at p. 205 ("The effects of oil pollution on cetaceans are poorly understood").

[83] *See, e.g.,* Final ESIAR, Appendix J at PDF p. 141 ("The total volume/mass of cuttings discharged during the drilling of a well would be dependent upon the well depth and the drilling conditions encountered."); *Id.* at PDF p. 147 ("The sediment plume may, thus, overlap with the CBA within the block as well as EBSA overlapping with the northeastern edge of the Licence Block, depending on the location of the well(s)."); *Id.* at p. 159 (VSP operations, and therefore noise impacts, will depend "on the well's depth and number of stations being profiled.")

ESIAR failed to adequately assess several likely and significant potential impacts on marine biodiversity, including permanent soundscape alteration, overlap with the migratory timing of protected species, and possible bioaccumulation of barite and other contaminants from discharges.

80. As a result, the Final ESIAR reaches conclusions on the project's marine impacts that are contrary to available evidence. This is especially true of the Final ESIAR's conclusions on impacts from underwater noise and drilling discharges.

81. **Underwater Noise:** The Final ESIAR describes the potential for severe injury and long-term population effects due to underwater noise impacts. For example, the Marine Ecology Report notes that "non-impulsive noise from drilling activities could result in behavioural disturbance in cetaceans to a maximum distance of up to 39.6 km," potentially affecting whales migrating and/or breeding along the coastline and animals associated with various seamounts and topographical features within or in the vicinity of Licence Block NCUD.[84] It also found that "[i]t is possible that the noise generated by VSP may mask biologically significant sounds, and cause disturbance and behavioural changes."[85] The Final ESIAR also noted that "[n]oise generated by helicopters undertaking crew transfers between Oranjemund/Alexander Bay/Kleinzee and the drilling unit could affect seals in breeding on the mainland coast."[86] As highlighted by Appellants EIA submission, these harms may be even greater than what the Final ESIAR predicts due to deficiencies in its underwater noise models and analysis. However, contrary to this evidence, the Final ESIAR broadly concluded that behavioural disturbance to marine mammals from all sources of underwater noise would be "Low" and "Fully Reversible."[87]

82. **Discharges:** The Final ESIAR's Marine Ecology Report describes permanent impacts to the poorly understood and highly sensitive benthic communities within the NCUD licence block. It states that "in low-energy, deep-water environments, such as those in the Licence Block NCUD, the effects of drilling discharges on benthic ecosystems are more severe and long-lasting," and cites several studies finding severe and long-term impacts of discharges to deepwater corals.[88] It also notes that cement discharges will "smother" any benthic biota present on the seabed and could lead to bioaccumulation effects "due to leaching of potentially toxic cement additives."[89] The Final ESIAR acknowledges these permanent and severe impacts while still ignoring other potentially significant impacts; including the potential bioaccumulation of barite and the toxic effects of contaminants found

[84] Final ESIAR, Appendix J at p. 161.
[85] Final ESIAR, Appendix J at p. 163.
[86] Final ESIAR, Appendix J at p. 165.
[87] Final ESIAR, Appendix J at p. 166.
[88] Final ESIAR, Appendix J at p. 31.
[89] Final ESIAR, Appendix J at p. 31.

in flowback water.[90] Despite this high likelihood of long-term and severe impacts on a marine environment categorized by high uncertainty, the Final ESIAR concluded that impacts to all marine fauna from these discharges would be of "Low" significance.[91]

V. THE AUTHORISED ACTIVITIES ARE NOT NEEDED OR DESIRABLE

83. Regulation 18 of the EIA Regulations requires a competent authority, in considering an application for an environmental authorisation, to have regard to the need and desirability of the undertaking of the proposed activity.

84. Section 2 of Appendix 3 to the EIA Regulations also states that the objective of the EIA process is to "*describe the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the development footprint on the approved site as contemplated in the accepted scoping report*".

85. The Guideline on Need and Desirability (2017) requires that the "need" for a project be assessed in terms of the broader public interest, not merely the applicant's commercial interests. "Desirability" must be evaluated in terms of the suitability of the location, the timing, and the alignment with spatial planning, sustainability, and the public good.

86. In its conclusion on Need and Desirability,[92] the Final ESIAR states that:

86.1. Fundamental issues around energy mix and transition are too complex to comprehensively and conclusively analyse at a project level – priorities need to be decided at a national policy level;

86.2. Its analysis of South African policy shows that it aims to progressively reduce GHG emissions while also ensuring a stable and efficient energy supply and enabling a just and inclusive economic growth to address critical South African challenges. It states that exploration for indigenous hydrocarbon resources in in principle compliant with and in furtherance of several energy, economy and resource-related policies and plans, and is not incompatible with climate change-related policies and targets;

86.3. Retaining optionality and diversity in national income, economy and energy supply appears desirable in itself (given that importance of energy to economic activity and growth, and the importance of fiscal income and economic growth to ensuring a prosperous and stable society in South Africa);

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[90] *See* Appellants' EIA submission at Section III ("Drilling Charges").
[91] Final ESIAR at p. xxxi.
[92] Final ESIAR, para 10.5.

86.4. Empirical data indicates that hydrocarbon resources are critical to the South African energy supply at present, and are likely to remain an important source of energy for some time, even in light of intense efforts to develop alternative low- or no-carbon energy sources, given the low penetration thereof in the energy mix at present;

86.5. Regarding the Proposed Project, the impact assessment deems all potential negative impacts of planned operations to be of very low to low significance (and thus deemed to be environmentally acceptable and sustainable in that they do not threaten the viability of any populations or habitats), pointing to the project's far offshore location and deepwater environment with lower abundance of fauna and sensitive habitats and relatively limited human activity;

86.6. Impacts of an 'unlikely' major oil spill on marine fauna and commercial fishing are deemed to be high with mitigation, but are 'somewhat moderated' by the fact that an oil plume is not predicted to reach the shore in the event of a major oil spill, while recognising that it is critical that the operator applies the highest standards to prevent and effectively respond to a major oil spill event.

86.7. Questions posed in the 2017 Need and Desirability Guideline are explored and responded to in section 10.3 of the Final ESIAR, and the project largely aligns with, or does not affect, aspects informing the need and desirability.

87. In its response to the appellants' comments on the draft ESIAR relating to need and desirability, the need and desirability of oil and gas generally is again justified on the basis of policies and plans support the development of the oil and gas industry to spearhead economic development and job creation, that oil and gas can assist in ensuring energy security in South Africa, and that gas can be used as a baseload energy source to replace coal-based energy (with the claim that natural gas is more closely aligned with South Africa's GHG emission targets than coal). Regarding the project deed and desirability, it is pointed out that the '*objectives of need and desirability set out above contemplates the production, processing, transporting and use oil/gas. This is not the subject of this Project*'.[93]

88. In the EA Reasons for Decision, the DG states in para 3.6 that the Final ESIAR considered the need and desirability of the authorised activities in the context of energy and resources-related policies and plans, climate change policies etc. The project '*is deemed compatible and harmonious with the said policies. More importantly, the need and desirability of the project, considered the environmental and socio-economic sustainability of the project and outcomes, as per 3.2 and 3.3, are therefore deemed acceptable'*.

[93] Comments and Response Report, p25.

89. The Appellants submit that the Proposed Project is not needed or desirable, for the reasons set out below.

Failure to consider the negative climate change impacts of the full lifecycle of oil and gas exploitation

90. The appellants submit that the Need and Desirability assessment and the reliance thereon by the DG in making his decision on authorisation are fatally flawed in that the Final ESIAR failed to consider the negative climate change impacts that will be caused by the production, processing, transporting and use of any oil or gas discovered by the Proposed Project (the full lifecycle of oil and gas exploitation).

91. It is submitted that the entire approach adopted by the Final ESIAR is flawed because it justifies the need for the Proposed Project with regard to policies and plans (such as the outdated White Paper on Energy Policy 2008, the 2019 IRP, Operation Phakisa and the draft Gas Master Plan) having the objective of locating oil or gas to meet South Africa's energy and economic needs (while underplaying policies and plans that focus on decarbonisation through investment in renewable resources and reducing dependence on fossil fuels, such as the Just Energy Transition Investment Plan and South Africa's Low Emission Development Strategy) , but excludes an assessment of the negative climate change impacts of such production, processing, transporting and use of oil and gas on the basis that this *'is not the subject of the project'*.[94] The Climate Change Risk Assessment similarly limited its climate change impact assessment to the impact of the project's GHG emissions: *'Note that this CCRA is limited to the proposed exploration activities…'*.[95]

92. In *Sustaining the Wild Coast* the Makhanda High Court accepted that a need and desirability assessment for a fossil fuel exploration ought to consider the consequence of burning any fossil fuels discovered.[96] It is relevant to note that the Supreme Court of Appeal did not disturb this finding.[97]

93. It is also relevant to note that in the *Thabametsi* case, the High Court held that a comprehensive assessment that considers the entire life-cycle of a project is necessary to place all relevant information at the decision-maker's purview.

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[94] Comments and Response Report, p25.
[95] Climate Change Risk Assessment, p11.
[96] *Sustaining the Wild Coast NPC and Others v Minister of Mineral Resources and Energy and Others* 2022 (6) SA 589 (ECMk), paras 120 to 125.
[97] The SCA indicated that it could not endorse the High Court's finding *'[a]uthorising new oil and gas exploration, with its goal of finding exploitable oil and/or gas reserve and consequently leading to production, is not consistent with South Africa complying with its international climate change commitments'*.

94. The appellants submit that the Final ESIAR's assessment of need and desirability, and the DG's reliance on this assessment, is fatally flawed because it failed to take into account the individual and cumulative climate change impacts which will be caused by the production, processing, transporting and use of any fossil fuels discovered by the project (i.e. the potential lifecycle impacts of the Proposed Project).[98] These are discussed in more detail below.

Assumption of gas as a transition fuel

95. The Final ESIAR claims that gas may act as a transition fuel, and relies primarily on the 2019 IRP, to support its claim.[99]

96. It is submitted that any assertion of natural gas being a transition fuel, is unfounded and contradicts widely accepted scientific conclusions. It is both inaccurate and deceptive to suggest that gas is necessary as a transition fuel in South Africa.

97. The IRP 2019 itself cautions that 3000 MW of new gas capacity is unlikely to justify new gas infrastructure.[100] The IRP 2019 acknowledges that the 3000 MW of new gas capacity it proposes is premised on a variety of constraints (constraints which continue to be of relevance today).[101] This is due to the low average load factor (approximately 12%) and the significant constraints imposed on gas development, including environmental sensitivities, port availability, and transmission limitations. The IRP makes it clear that such modest and infrequent gas usage does not support large-scale investment in new gas infrastructure or power plants. The project is one of numerous projects to have obtained environmental authorisation in recent years. Viewed cumulatively, the Department is authorising large-scale gas development, contrary to the cautions of the IRP 2019 and the expert analyses referenced below.

98. Moreover, recent independent studies dispute the notion that fossil gas is essential for electricity generation or as a transition fuel, and they confirm that renewable energy, paired with battery storage, can fulfil nearly all of South Africa's energy requirements.

99. The International Institute for Sustainable Development's (IISD) report "Gas Pressure: Exploring the Case for Gas-Fired Power in South Africa" (March 2022) highlights that while it was once believed that fossil gas would be essential either during the transition to low-carbon energy or as part of the long-term energy mix for

[98] Section 2(4)(e) of NEMA stipulates that responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.
[99] Paragraphs 10.1.1, 10.1.2. and 10.1.5 of the Final ESIAR.
[100] Integrated Resource Plan 2019, p. 47.
[101] Ibid.

electricity generation, the dramatic reductions in renewable energy and battery storage costs have overturned this perspective. Analysis of South Africa's electricity system indicates that gas supply is not technically needed until at least 2035, if at all. In recent years, the risks associated with gas have either increased or become better understood. As a result, developing a large gas-to-power system now could lead to significant negative consequences for South Africa. The shift toward decarbonization, combined with the declining costs of renewable energy and storage, presents risks for gas investments, which are likely to result in higher consumer costs, challenges for workers during the transition, and losses for investors.[102]

100. The IISD report highlights some of the risks associated with gas-to-power investment in South Africa. These risks encompass significant contributions to climate change (due to CO2 and methane emissions from burning gas), growing global pressure to phase out gas because of its climate impacts, financial risks associated with gas-to-power projects, the potential for reduced security of affordable gas supply, the threat of stranded assets, and the risk of adding further just transition challenges (as future gas workers and communities may face similar difficulties to those currently experienced by the coal sector).[103]

101. Meridian Economics' "Hot Air about Gas – An Economic Analysis of the Scope and Role for Gas-Fired Power Generation in South Africa" (June 2022) report points out that while South Africa's large-scale use of gas appears to be central to current energy policy direction in South Africa, 'this rests on a 2012 vision which pre-dates dramatic reductions in renewable energy costs and carbon emissions space'.[104] The report further explains that independent analyses from several recent studies indicate that South Africa's power requirements, both now and in the future, can be met with minimal reliance on gas. It states that there is "no evidence to support the large-scale gas envisioned in the GMP, as this is uneconomical even without considering carbon emissions." Meridian highlights that the assumption of gas-fired power generation replacing coal overlooks the fact that other technology combinations are now more effective at replacing coal-fired power than gas, and that gas-fired generation should be compared to these alternatives.[105]

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[102] IISD, *Gas Pressure: Exploring the case for gas-fired power in South Africa*, p. iv (2022), *available at* https://www.iisd.org/system/files/2022-03/south-africa-no-need-for-gas.pdf
[103] IISD report, pages 8 – 12.
[104] Meridian Economics, *Hot Air about Gas – An Economic Analysis of the Scope and Role for Gas-Fired Power Generation in South Africa*, page ii (2022), *available at* https://meridianeconomics.co.za/wp-content/uploads/2022/06/Hot-Air-About-Gas.pdf
[105] *Ibid*, p1.

102. The Vital Ambition Report,[106] produced by Meridian Economics in partnership with the CSIR Energy Centre, states that gas for power generation is only justified in South Africa's energy mix if it is needed for low-utilization flexible capacity (peaker plants) to balance the system during peak power demand. The report confirms that there is no need for investments in gas infrastructure for energy production and generation at present or in the near future.[107]

103. Furthermore, the 2019 IRP is in the process of being updated, and should align with South Africa's Nationally Determined Contribution under the Paris Agreement and to keep pace with quickly evolving science and significant reductions in price for solar and wind energy. However, even the 2019 IRP, which is rooted in an outdated and scientifically and economically unsound understanding of the necessity for any gas in the energy mix[1], only projects the collective contribution of gas and diesel to the 2030 energy mix to be 1.3% combined.[108]

104. A 2024 analysis of the draft IRP 2023 by Meridian Economics highlights that South Africa's energy system has changed significantly since previous planning in 2019.[109]

105. While some gas may be needed to support the system, especially outside daylight hours, Meridian warns against over-investing in large-scale gas infrastructure, given the high cost and risk of stranded assets. Instead, it supports a limited, carefully targeted role for gas alongside renewables and storage. Again, viewed cumulatively and in the context of multiple oil and gas exploration projects being authorised, the decision-maker ought to have considered whether authorising yet another oil and gas exploration project is in fact necessary and desirable. Based on the evidence to hand, arguably it is not.

Failure to consider climate change impacts as part of need and desirability

106. In assessing need and desirability, NEMA requires that development be sustainable and that the competent authority "take into account all relevant factors."[110] The Guidelines requires need and desirability assessment to address the impact of planned activities on global and international responsibilities relating to the

[106] Meridian Economics, *A Vital Ambition: Determining the Cost of Additional CO2 Emission Mitigation in the South African Electricity System* (2020), *available at* https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf
[107] Gas and peaking resources contribute just 1.1% of total electricity generation in 2025, and 2.4% by 2035 according to the same Meridian report.
[108] 2019 Integrated Resource Plan, page 42.
[109] Meridian Economics, *Review of the IRP 2023*, page 65 (2024), *available at* https://meridianeconomics.co.za/wp-content/uploads/2024/03/IRP2023-Modelling-Submission-20240318.0.pdf
[110] 24O(1)(b) of NEMA.

environment, including climate change.[111] Recent court jurisprudence[112] regards failure to conduct a full climate change assessment of the proposed project as non-compliance with section 24O(1) of NEMA.[113] In *Shell* the court held "*... had the decision-maker had the benefit of considering a comprehensive assessment of the need and desirability of exploring for new oil and gas reserves for climate change and the right to food perspective, the decision-maker may very well have concluded that the proposed exploration is neither needed nor desirable*." [114] The DESIAR does not contain a comprehensive assessment of the impact of exploration activities on climate change, it reviewed South Africa's climate change policies instead of conducting a proper assessment that looks at the entire life-cycle of the proposed project.

107. As the court indicated in *Shell*, we believe that any rational decision-maker would refuse the environmental authorization in this case, given the urgency of phasing out fossil fuels to prevent the climate crisis. It is well-established that the climate change 'crisis' demands urgent, swift, and extensive cuts in greenhouse gas (GHG) emissions to limit global warming to 1.5°C. This includes accelerated efforts over the next 5 years to reduce global carbon dioxide emissions by 45% by 2030 compared to 2010 levels, and to reach net-zero emissions by mid-century. To support these claims, a few recent developments related to the climate crisis are briefly discussed below.

108. Just last week, the International Court of Justice issued its sweeping and comprehensive advisory opinion on Obligations of States in respect of Climate Change, stating that governments have an obligation under customary international law and treaty law to protect present and future generation from climate change harms caused by the burning of fossil fuels within and beyond their borders, and that countries must take measures to reduce greenhouse gas emissions (GHG) and act with heightened vigilance to enforce these measures.[115] Many aspects of the opinion are relevant to South Africa's push to develop its offshore oil and gas resources, including the project at hand:

    108.1. Countries have a customary legal duty to prevent their conduct from causing climate harm both within their borders and outside of their borders and are responsible for the climate harm caused by corporations and other

[111] Paragraph 1.1.8 Page 11 of the Guidelines.
[112] At paragraph 125 of Sustaining the Wild Coast NPC and Others v Minister of Mineral Resources and Energy and Others 2022 (6) SA 589;
[113] At paragraphs 76-101 of Earthlife Judgment.
[114] At paragraph 125 of the Shell Judgement.
[115] International Court of Justice, Obligations of States in respect of Climate Change, 23 July 2025 Advisory Opinion ("ICJ Advisory Opinion"), https://www.icj-cij.org/sites/default/files/case-related/187/187-20250723-adv-01-00-en.pdf.

polluters under their jurisdiction or control and must act with due diligence.[116]

108.2. Appropriate rules and measures that governments should take include "regulatory mitigation mechanisms that are designed to achieve the deep, rapid, and sustained reductions of GHG emissions that are necessary for the prevention of significant harm to the climate system".[117]

108.3. Countries must access the possible cumulative effects of their acts and the planned activities under their jurisdiction or control. The Court stated its view that "a risk of significant harm may also be present in situations where significant harm to the environment is caused by the cumulative effect of different acts undertaken by various States and by private actors subject to their respective jurisdiction or control, even if it is difficult in such situations to identify a specific share of responsibility of any particular State."[118]

108.4. The court affirmed that the human right to a clean, healthy, and sustainable environment is essential for the enjoyment of other human rights and includes a right to a healthy climate.

108.5. Countries can be held accountable if they fail to take action to protect the climate system from GHG emissions, including emissions attributable to fossil fuel production, fossil fuel consumption, the granting of fossil fuel exploration licenses or the provision of fossil fuel subsidies.[119]

109. With respect to NDCs, the Court noted that "[e]ach party has a due diligence obligation to do its utmost to ensure that the NDCs it puts forward represent its highest possible ambition in order to realize the objectives of the [Paris] Agreement (Article 4, paragraph 2)", which is to hold the increase in the global average temperature to below 1.5°C.[120] The Court further stated: "Consequently, parties have an obligation to undertake best efforts to achieve the content of their NDCs."[121]

110. The ICJ also referred in detail to many reports published by the Intergovernmental Panel on Climate Change (IPCC). In August 2021, IPCC, an international organization dedicated to evaluating climate change science, published its 6th Assessment Report (AR6).[122] In the summary for policymakers, the IPCC highlights, among other points, that:

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[116] ICJ Advisory Opinion, paras. 272-300.
[117] ICJ Advisory Opinion, para. 282.
[118] ICJ Advisory Opinion, para. 276.
[119] ICJ Advisory Opinion, para. 427.
[120] ICJ Advisory Opinion, paras. 242, 270.
[121] ICJ Advisory Opinion, para. 270.
[122] Climate Change 2021: The Physical Science Basis, available online at:

111. It is unequivocal that human influence has warmed the atmosphere, ocean and land, and that widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred;[123]

    a) The scale of recent changes across the climate system as a whole - and the present state of many aspects of the climate system - are unprecedented over many centuries to many thousands of years;[124]

    b) Human-induced climate change is already impacting various weather and climate extremes worldwide. The evidence of changes in extremes, such as heatwaves, heavy rainfall, droughts, and tropical cyclones, as well as their connection to human activities, has become stronger since the release of AR5.[125]

    c) Global surface temperature will continue to increase until at least mid-century under all emissions scenarios considered, and that global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO2 and other GHG emissions occur in the coming decades;[126]

    d) Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, heavy precipitation, and, in some regions, agricultural and ecological droughts; an increase in the proportion of intense tropical cyclones; and reductions in Arctic sea ice, snow cover and permafrost;[127]

    e) Continued global warming is projected to further intensify the global water cycle, including its variability, global monsoon precipitation and the severity of wet and dry events;[128]

    f) From a physical science perspective, limiting human-induced global warming to a specific level requires limiting cumulative CO2 emissions, reaching at least net zero CO2 emissions, along with strong reductions in other GHG emissions. Strong, rapid and sustained reductions in CH4 emissions would also limit the warming effect resulting from declining aerosol pollution and would improve air quality.[129]

112. On 9 August 2021, the IPCC issued a press release relating to its AR6 report. It states that the report provides new estimates of the chances of crossing the global

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https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

[123] Paragraph A.1.
[124] Paragraph A.2.
[125] Paragraph A.3.
[126] Paragraph B.5.
[127] Paragraph D.1.
[128] Paragraph B.5.
[129] Paragraph D.1.

warming level of l.5°C in the next decades, and finds that unless there are immediate, rapid and large-scale reductions in GHG emissions, limiting warming to close to l.5°C or even 2°C will be beyond reach.[130]

113. The International Energy Agency's (IEA) recent report, *"Net Zero by 2050: A Roadmap for the Global Energy Sector,"* states that reaching net zero by 2050 and limiting global temperature rise to 1.5°C above pre-industrial levels "demands a complete transformation of the energy systems" that support the world's economies. This goal can only be achieved if no new oil and gas fields are approved for development. The report emphasizes the urgent need for widespread deployment of all available clean and efficient energy technologies, along with a halt to approvals for new oil and gas projects.

114. The climate change impact assessment and Final ESIAR fall far short of meeting the obligations set out above, including those set out in the recent ICJ Advisory Opinion. It makes no effort to assess the potential life-cycle climate impacts of the project, including from production. It also fails to assess the cumulative impacts of the several oil and gas exploration projects under consideration in South Africa, and whether these impacts are consistent with South Africa's obligations to reduce its emissions by the highest possible ambition. This last point is fully discussed on the grounds related to failure to assess cumulative impacts below.

115. In summary, it is submitted that a reasonable decision-maker could not approve this project if it were to consider the full life-cycle and cumulative climate impacts. The Minister is respectfully requested to exercise her powers in terms of section 43(6) of NEMA and set aside the environmental authorisation.

VI. FAILURE TO ASSESS TRANSBOUNDARY IMPACTS

116. The appellants' note that the Final ESIAR establishes that an oil spill caused by a well blowout may lead to oil contaminating international and Namibian waters. Despite this, the Final ESIAR (and the specialist reports attached to it) do not assess the impacts of such contamination.

117. The Final ESIAR recognizes that the proposed project may have significant transboundary impacts. The ESIA's oil spill modelling found that, in the event of a well blowout:

> "an unplanned, large-scale blowout of 20-days duration is likely to result in offshore oil contamination of [inter]national scale, crossing the South African-Namibian maritime border and extending into international waters... Large scale effects on fishing operations would include area closures and

[130] https://www.ipcc.ch/2021/08/09/ar6-wgl-20210809-pr/

> exclusion of fisheries from areas that may be polluted or closed to fishing due to contamination of surface waters by oil or the chemicals used for cleaning oil spills. Based on the extent of the surface oiling with respect to the operations of commercial fisheries, the large pelagic longline, tuna pole, demersal trawl and demersal longline sectors could be impacted in both South Africa and Namibia. Not only is it likely that fish species would move out of an area, but operators would be forced to avoid polluted areas due to risk of fishing gear damage and product contamination'.[131]

118. The Final ESIAR goes on to state that:

> "Despite the relatively low likelihood of contamination of fishing grounds, the intensity of the potential impact of a blow-out of hydrocarbons is **very high**. The impacts would likely persist over the **short term** and extend **nationally/internationally**, crossing the EEZ boundary into Namibian and international waters. The impacts of a blow-out can therefore be expected to be of **high** consequence'.[132]

119. Notwithstanding the above, the Final ESIAR arbitrarily constrains its assessment of oil spill impacts at the South African border. For example, the ESIA's Socio-Economic Assessment provides an assessment on the socio-economic impact of a reduction in income from commercial fishing in South Africa due to a blowout, but fails to include an assessment of the socio-economic impact of a reduction in income from commercial fishing in Namibia due to a blowout.[133] Similarly, no assessment of socio-economic impacts of a blow-out on Nambian small scale fishing, tourism or social disruption and change in social dynamics is provided..

120. The appellants' submit that there is a legal obligation to conduct a detailed assessment of the impacts on international waters and in Namibia, for the following reasons:

- Nothing in NEMA provides that the assessment of impacts of activities which require an environmental authorisation is limited to impacts arising in South Africa;
- Section 2(e) of NEMA provides that one of the objectives of the Act is 'to give effect to the Republic's obligations in terms of international law regarding coastal management and the marine environment'.
- Section 233 of the Constitution provides that:

> *When interpreting any legislation every court must prefer any reasonable interpretation of the legislation that is consistent with*

[131] Final ESIAR, p448.
[132] Final ESIAR, p449.
[133] Appendix L, Socio Economic Impact Assessment, p62.

> *international law over any alternative interpretation that is not inconsistent with international law*.

121. At least four international obligations are relevant.

122. First, South Africa is a party to the Convention for Co-Operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region ("Abidjan Convention").

123. The Abidjan Convention relates to the marine environment (including the coastal zone) within the jurisdiction of the states from (and including) Mauritania to Namibia.[134]

124. Second, South Africa is a party to the Benguela Current Convention. One of the objects of this Convention is to promote a co-ordinated regional approach to the long-term conservation, protection, rehabilitation, enhancement and sustainable use of the Benguela Current Large Marine Ecosystem, to provide economic, environmental and social benefits.[135] The area of application for the Benguela Current Convention is all areas within the national jurisdiction of South Africa, Namibia and Angola.[136] The Final ESIAR indicates that "*Licence Block NCUD is located in the southern section of the Benguela Current Large Marine Ecosystem*."[137]

125. Article 4(2)(b) requires the member states to undertake environmental impact assessment for all proposed activities which are likely to cause adverse impacts on the marine and coastal environments.

126. Article 1 of the Benguela Current Convention defines adverse impacts to include any actual or potential detrimental effect on the Benguela Current Large Marine Ecosystem including those effects which extend beyond the jurisdiction of a Party.

127. Accordingly, where an activity in South Africa will have effect which extend beyond South Africa's jurisdiction, the Benguela Current Convention obliges South Africa to assess those impacts.

128. Third, Article 206 of the United Nations Convention on the Law of the Sea provides as follows:

> "When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effect of such activities on the marine

[134] Article 1.
[135] Article 2.
[136] Article 3.
[137] Final ESIAR, pxii.

environment and shall communicate reports of the results of such assessments in the manner provided in article 205."

129. Fourth, general International Law (as confirmed by the International Court of Justice in the *Case Concerning Pulp Mills on the River Uruguay Judgment ICP Reports 2010, p14)* requires states to conduct an environmental impact assessment where there is a risk that a proposed activity may have a significant impact in a transboundary context.

130. As a result:

- Shell was obliged to assess the impacts of the project on Namibian waters, the Nambian shoreline, and international waters; and
- The DG was obliged to consider the results of that assessment.

131. No such assessment was undertaken.

132. It is submitted that in light of the above it is apparent that:

- The proposed project may have significant impacts on Namibian and international waters;
- The Final ESIAR (and the specialist reports on which it relies) did not assess these impacts; and
- The DG took his/her decision in the absence of an assessment of these impacts.

133. In light of the above, the Minister is respectfully requested to exercise her powers in terms of section 43(6) of NEMA and set aside the environmental authorisation.

VII. FAILURE TO GIVE EFFECT TO THE NATIONAL ENVIRONMENTAL MANAGEMENT: INTEGRATED COASTAL MANAGEMENT ACT 24 OF 2008 ("ICMA")

134. The preamble to ICMA recognises that:

- everyone has the constitutional right to have the environment, including the coastal environment, protected for the benefit of present and future generations;
- integrated management of the coastal zone as a system is essential to achieve the constitutional commitment to improving the quality of life of all citizens, while protecting the natural environment for the benefit of present and future generations;
- the coastal zone is a unique part of the environment in which biophysical, economic, social and institutional considerations interconnect in a manner that requires a dedicated and integrated management approach;

- much of the rich natural heritage of our coastal zone is being squandered by overuse, degradation and inappropriate management;
- the economic, social and environmental benefits of the coastal zone have been distributed unfairly in the past;
- the conservation and sustainable use of the coastal zone requires the establishment of an innovative legal and institutional framework that clearly defines the status of coastal land and waters and the respective roles of the public, the State and other users of the coastal zone and that facilitates a new co-operative and participatory approach to managing the coast; and
- integrated coastal management should be an evolving process that learns from past experiences, that takes account of the functioning of the coastal zone as a whole and that seeks to co-ordinate and regulate the various human activities that take place in the coastal zone in order to achieve its conservation and sustainable use.

135. The objects of the Act[138] include (among others):

- to preserve, protect, extend and enhance the status of coastal public property as being held in trust by the State on behalf of all South Africans, including future generations;[139]
- to secure equitable access to the opportunities and benefits of coastal public property;[140]
- to provide for the establishment, use and management of the coastal protection zone;[141] and
- to give effect to the Republic's obligations in terms of international law regarding coastal management and the marine environment.[142]

'Coastal public property' is defined as including (among others) 'coastal waters',[143] which is in turn defined as including (among others) 'territorial waters, the exclusive economic zone and continental shelf of the Republic'.[144]

136. The Act indicates that the purpose of coastal public property (which includes coastal waters such as the Exclusive Economic Zone) includes to protect sensitive coastal ecosystems.[145]

[138] Section 2.
[139] Section 2(c).
[140] Section 2(d).
[141] Section 2(dA).
[142] Section 2(e).
[143] Section 2 read with section 7.
[144] Section 2.
[145] Section 7A(a)(b).

137. Section 12 of ICMA prescribes that the State, in its capacity as the public trustee of all coastal public property, must:

(a) ensure that coastal public property is used, managed, protected, conserved and enhanced in the interests of the whole community; and

(b) take whatever reasonable legislative and other measures it considers necessary to conserve and protect coastal public property for the benefit of present and future generations.

The 'interests of the whole community' is defined in ICMA as meaning:

> 'the collective interests of the community determined by:
>
> (a) prioritising the collective interests in coastal public property of all persons living in the Republic over the interests of a particular group or sector of society;
>
> (b) adopting a long-term perspective that takes into account the interests of future generations in inheriting coastal public property and a coastal environment characterised by healthy and productive ecosystems and economic activities that are ecologically and socially sustainable; and
>
> (c) taking into account the interests of other living organisms that are dependent on the coastal environment.'[146]

138. Section 63(1) of ICMA stipulates that where an environmental authorisation in terms of Chapter 5 of the National Environmental Management Act is required for coastal activities, the competent authority must take into account all relevant factors, including (among others):

(a) the representations made by the applicant and by interested and affected parties;
(b) the extent to which the applicant has in the past complied with similar authorisations;
(c) whether coastal public property... will be affected, and if so, the extent to which the proposed development or activity is consistent with the purpose for establishing and protecting those areas;
(d) the ... coastal management objectives applicable in the area;
(e) the socio-economic impact if the activity:
  (i) is authorised;
  (ii) is not authorised;
(f) . .
(g) the likely impact of coastal environmental processes on the proposed activity;
(h) whether the development or activity:

[146] Section 2.

(i) is situated within coastal public property and is inconsistent with the objective of conserving and enhancing coastal public property for the benefit of current and future generations;
(ii) ...
(iii) ...
(iv) is likely to cause irreversible or long-lasting adverse effects to any aspect of the coastal environment that cannot satisfactorily be mitigated;
(v) ...
(vi) ....; or
(vii) would be contrary to the interests of the whole community;

(i) whether the very nature of the proposed activity or development requires it to be located within coastal public property, the coastal protection zone or coastal access land;
(j) whether the proposed activity or development will provide important services to the public when using coastal public property, the coastal protection zone, coastal access land or a coastal protected area; and
(k) the objects of this Act, where applicable.

139. The EA states that the DG considered all information presented to the Department, including provisions of ICMA.[147] Under the heading 'Key Findings', the EA indicates that careful consideration of information submitted to the Department resulted in the conclusion that all fundamental and procedural requirements prescribed in (among others) ICMA were satisfied.[148] A further paragraph states in relation to the provisions of s12 and s63 of ICMA were "duly considered", and goes on to conclude that:

> '[b]ased on the outcomes of the environmental impact assessment carried out and the proposed mitigation measures, the proposed authorised activities is deemed acceptable. In addition, the authorised activities are not contrary to the interests of the whole community and future generations'.[149]

140. It is clear from the above that the DG's conclusion that the proposed activities were 'deemed acceptable' and 'are not contrary to the interests of the whole community and future generations' is based on the information contained in the Final ESIAR (and supporting documents).

141. Section 2.2.1.3 of the Final ESIAR includes a section referencing ICMA, and acknowledges that the proposed project falls under the definition of a "coastal activity" and is located within "coastal waters". The section indicates further that '*the Competent Authority must, in terms of Section 63, take a number of factors into consideration in deciding on the application for authorisation, including the likely*

[147] EA, Reasons for Decision, para 1.1.
[148] EA, Reasons for Decision, para 3.1.
[149] EA, Reasons for Decision, para 3.4.

impact of the proposed activity on the coastal environment (biophysical and socio-economic), including cumulative effect of its impact together with other existing activities'. This is followed by a table providing a 'consideration' of ICMA s63 requirements in relation to the Proposed Project.[150]

142. It is submitted that the information provided to the DG relating to the section 63 ICMA factors was fundamentally flawed in a number of respects, including (but not necessarily limited to) the following:

142.1. In relation to s63(1)(b) (the extent to which the applicant has in the past complied with similar authorisations), the 'consideration' of ICMA s63 requirements presented in the Final ESIAR indicates that Shell has not undertaken similar work in South Africa, and thus there is no opportunity for past compliance with similar authorisations. As a potential comparative aspect, reference is made to Shell having drilled eight wells in Namibia. However, no reference is made to Shell's poor compliance elsewhere. As is pointed out in Section III of this appeal above, Shell has a track record of failing to adequately respond to and remediate oil spills caused by its projects in Africa, which have contributed to devastating economic and human health impacts for local communities. According to the United Nations, at least 13 million barrels of crude oil have been spilled since 1958 in at least 7,000 incidents in the Niger Delta region, where Shell is the largest private oil and gas company.[151] A 2011 United Nations Environment Programme (UNEP) report documented the contamination of soil, groundwater, fisheries, and agricultural land; the poisoning of drinking water; and the exposure of hundreds of thousands of people to serious health risks from oil pollution in Ogoniland, Nigeria.[152] Clean-up has suffered from corruption and other issues, and local communities are still living with the devastating impact of oil pollution.[153] It is clear from this example that the 'consideration' of Shell's past compliance thus only presents a one-sided view to the DG for consideration of this ICMA s63 factor when making his decision on authorisation.

142.2. In relation to s63(1)(c) (whether coastal public property will be affected, and if so the extent to which the proposed development or activity is consistent with the purpose for establishing and protecting those areas), the 'consideration' of ICMA s63 requirements presented in the Final ESIAR indicates that it considered the potential impact of the proposed project

[150] Final ESIAR, Table 2.2, pages 14 to 18.
[151] Simi Jolaoso, *Oil clean-up 'scam' warnings ignored by Shell, whistleblower tells BBC*, BBC News (Feb. 11, 2025), https://www.bbc.com/news/articles/c0rqe85q1jno [hereinafter Jolaoso, Oil clean-up 'scam' warnings].
[152] UNEP, *Environmental assessment of Ogoniland* (2011), https://wedocs.unep.org/20.500.11822/7947.
[153] Jolaoso, Oil clean-up 'scam' warnings.

on each of these items, including an assessment of the extent to which the marine environment and coast may be impacted as a result of the proposed project (including unplanned events). As is pointed out in this appeal above, the Oil Spill Modelling conducted was deficient and does not accurately assess the risk of a major unplanned oil spill to marine life and coastal communities (see Section I of this appeal above), while the assessment of Biodiversity / Marine Impacts was also inadequate (see Section IV of this appeal above). It is submitted that these flawed and inadequate assessments do not provide reliable information upon which the DG can reasonably rely to reach a conclusion that the proposed exploration project is consistent with the purpose for establishing and protecting coastal public property (such as the object to preserve, protect, extend and enhance the status of coastal public property as being held in trust by the State on behalf of all South Africans, including future generations).

142.3. In relation to s63(1)(h)(i) (whether the development or activity is situated within coastal public property and is inconsistent with the objective of conserving and enhancing coastal public property for the benefit of current and future generations), the 'consideration' of ICMA s63 requirements presented in the Final ESIAR indicates '*N/A - the proposed project is located in the offshore marine environment more than 300 km from the coast at its closest point, and is not situated within coastal public property'*. This is clearly incorrect – the proposed project is situated in coastal public property, and as appointed out above 'coastal public property' is defined in ICMA as including 'coastal waters'. Consequently, the 'consideration' of the s63 relevant factors presented in the Final ESIAR fails to address whether the proposed project is inconsistent with the objective of conserving and enhancing coastal public property for the benefit of current and future generations. As a result, no information was serving before the DG upon which he could reasonably / rationally assess whether the proposed project is inconsistent with the objective of conserving and enhancing coastal public property for the benefit of current and future generations.

142.4. In relation to s63(1)(h)(iv) (whether the activity or development is likely to cause irreversible or long-lasting adverse effects to any aspect of the coastal environment that cannot satisfactorily be mitigated), the 'consideration' of ICMA s63 requirements presented in the Final ESIAR Report indicates that in the 'unlikely event of a well blow-out, oil spill modelling results show no shoreline oiling…'. As is pointed out in this appeal above, the Oil Spill Modelling conducted was deficient and does

not accurately assess the risk of a major unplanned oil spill to marine life and coastal communities (see Section I of this appeal above). It is submitted that this flawed and inadequate assessment does not provide reliable information upon which the DG can reasonably rely to reach a conclusion on whether the proposed project is likely to cause irreversible or long-lasting adverse effects to any aspect of the coastal environment that cannot satisfactorily be mitigated.

142.5. In relation to s63(1)(h)(vii) (whether the development or activity would be contrary to the interests of the whole community), the 'consideration' of ICMA s63 requirements presented in the Final ESIAR Report indicates that the potential impacts and considerations of the 'whole community' are discussed throughout the EISAR, while the need and desirability is presented in Chapter 10.0 thereof. The 'consideration' goes on to state that *'[a]ll of these factors must be considered and assessed holistically to confirm that the proposed project is in the interests of the whole community'*. As mentioned above, the DG's EA states that the relevant provisions of s12 and s63 of ICMA were "duly considered", and goes on to conclude that the authorised activities 'are not contrary to the interests of the whole community and future generations'.[154] As is pointed out in this appeal above, the Oil Spill Modelling conducted was deficient and does not accurately assess the risk of a major unplanned oil spill to marine life and coastal communities (see Section I of this appeal above), the analysis of cumulative impacts was flawed (see Section III of this appeal above), the assessment of Biodiversity / Marine Impacts was also inadequate (see Section IV of this appeal above), and the Need and Desirability assessment was deficient in a number of critical respects (see Section V of this appeal above). It is submitted that these flawed and inadequate assessments do not provide reliable information upon which the DG can reasonably rely to reach a conclusion that the proposed exploration project 'is not contrary to the interests of the whole community'. It is submitted that the DG has not determined the 'collective interests of the community' by (among other things) failing to adopt a long-term perspective that takes into account the interests of future generations in inheriting coastal public property and a coastal environment characterised by healthy and productive ecosystems and economic activities that are ecologically and socially sustainable, and by failing to take into account the interests of other living organisms that are dependent on the coastal environment.'[155]

[154] EA, Reasons for Decision, para 3.4.
[155] Section 2.

142.6. In relation to s63(1)(k) (the requirement for the DG to take into account the objects of ICMA, where applicable), the 'consideration' of ICMA s63 factors presented in the Final ESIAR Report indicates in respect of section 2(c) that the ESIAR sets out the mitigation measures to ensure that potential impacts on coastal public property will be avoided or minimised to the extent that they arise. It appears that the Final ESIAR conflates mitigation of potential impacts with the section 2(c) object to 'preserve, protect, extend and enhance the status of coastal public property as being held in trust by the State on behalf of all South Africans, including future generations.' As a consequence, no information served before the DG addressing how the proposed project will preserve, protect, extend and enhance the status of coastal public property, and that as a consequence the DG failed to take this relevant factor into account when granting the EA.

143. For the reasons set out above, the Minister is respectfully requested to exercise his powers in terms of section 43(6) of NEMA and set aside the environmental authorisation.

VIII. CONCLUSION

144. For the reasons set out in the grounds of appeal above, the Appellants submit that the appeal should be upheld, and that the environmental authorisation granted to Shell should be set aside. Accordingly, the Minister is respectfully requested to exercise his powers in terms of section 43(6) of NEMA and set aside the environmental authorisation.

Date: 29 July 2025

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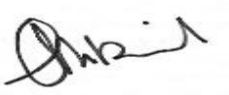

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