



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

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APPEAL RESPONSE REPORT

PROJECT NAME/TITLE: CGG Services SAS Proposed 3D seismic survey off the Southeast Coast, South Africa

PROJECT LOCATION: The environmental authorisation application area is located between Geberha and about 120 km southeast of Pletenberg Bay offshore of the Eastern Cape Province. The distance between the inshore application area boundary and the coast is about 50km from Gqeberha, 45 and 60km from Gqeberha to St Francis Bay and 45 and 120 km from St Francis Bay to east of Pletenberg Bay. It covers several petroleum license blocks, with an approximate size of 9000 km² - the Algoa, Gamtoos and Outeniqua Basins off the southeast coast, South Africa.

PROJECT REFERENCE NUMBER: 12/1/045

DATE PROJECT/ACTIVITY AUTHORISED: 16 November 2023

DATE NOTIFIED OF DECISION: 23 November 2023

DETAILS OF THE APPELLANT	DETAILS OF THE APPLICANT
Name of appellant: Oceans Not Oil coalition	Name of applicant: CGG Services SAS (CGG)
Appellant's representative (if applicable): Janet Solomon	Applicant's representative (if applicable): CGG Algoa Stakeholder Engagement
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GROUNDS OF APPEAL	RESPONDING STATEMENT BY THE APPLICANT	COMMENTS BY THE DEPARTMENT
<p>1. DECISION TO AUTHORISE MADE IN A CRITICAL POLICY VACUUM</p> <p>a. The authorisation of activities involved in seismic survey operations for oil and gas, has occurred without assurance that they are compatible with other ocean uses and objectives within the marine environment, since the necessary ocean governance framework, required to implement the Constitutional imperative flowing from Section 24 of the Constitution of the Republic of South Africa (1996), has yet to be implemented:</p> <ul style="list-style-type: none"> • the White Paper on the National Environmental Management of the Ocean (2014) has yet to be promulgated, and • The Marine Spatial Planning Act, 16 of 2018, (“MSPA”) still requires development of the Marine Area Plans (as defined in the MSPA). <p>i. This effectively renders the continuation of the environmental authorisation unlawful as it, <i>inter alia</i>, ignores alternate sectoral objectives as well as cumulative pressures to the marine ecosystem itself.</p> <p>ii. Pursuant to Section 3(2) of the MSPA, states that,</p> <p style="padding-left: 40px;">“Any right, permit, permission, license or any other authorisation issued in terms of any other law must be consistent with the approved marine area plans.” (My emphasis added)</p>		

<p>The Competent Authority was therefore never entitled, in law, to award an EA (ref. 12/1/045) to CGG, granted on 16 November 2023, until such time as the Marine Area Plans are gazetted, come into law, and become binding. Because the Marine Area Plans have not yet been “approved” as envisaged by section 3(2) of the MSPA, no ‘right, permit, permission, license or any other authorisation’ (such as the environmental authorization) could be deemed to be ‘consistent’ with the said Marine Area Plans. Therefore, and considering the preemptory language used by the drafters of the MSPA <i>viz</i> the use of the word “must” – the environmental authorisation (i.e., the decisions that are subject to this appeal) granted to CGG was unlawful.</p> <p>b. The decision to implement Section 6 of the National Energy Act (NEA) into operation with effect from 1 April 2024 has been announced by President Ramaphosa. The National Energy Act, Section 6 requires the Minister of Mineral Resources and Energy to develop an Integrated Energy Plan (IEP) in the context of the current climate crisis. Without the legislative framework, this application lacks the appropriate guidelines prescribing the adoption and implementation of performance management systems relating to the global warming and international carbon commitments. Offshore exploration for fossil fuels lacks the legislative mandate to proceed whilst the IEP undergoes full public participation and consideration as per the Constitution.</p>		
<p>2. ASSESSMENT METHODOLOGY INSUFFICIENT</p> <p>a. South Africa is party to the Conservation of Migratory Species (CMS) agreement (adopted in 2017, RSA became a contracting</p>		

<p>party on 1 April 2002). The specific mandate outlined in its Resolution 12.14 requires the execution of a full, thorough EIA before commencing any noise-emitting operations that could affect marine life detrimentally.</p> <p>Instead, the CGG EA decision relies upon a Basic Assessment Report (BAR), meaning that PASA’s acceptance of the environmental report has failed to meet its primary obligation to abide by this international agreement.</p>		
<p>3. NO SOCIAL LICENSE TO OPERATE</p> <p>Overwhelmingly this project has failed to obtain a valid social license to operate from local communities, or approval among its stakeholders. In fact, the broad public response is resistance to the CGG survey and negative response to its environmental authorisation.</p> <p>This permit was awarded despite objections and concerns raised by government departments, NGO’s and the public and a petition to the honourable Ministers of Mineral Resources and Energy and Forestry, Fisheries and the Environment, which has not yet been sufficiently addressed.</p> <p>a. Annexure 1: the 18576 written objections made by signatories to the We Object to Shell and CGG Seismic Surveys on RSA Coast petition (Change.org - https://www.change.org/p/shearwater-geoservices-shearwatergeo-and-shell-stop-blasting-the-wild-coast-our-voices-can-make-a-difference-and-put-an-end-to-shell-blasting-in-the-wild-coast)</p>		

Annexure 2: The list of 314361 signatures from the We Object to Shell and CGG Seismic Surveys on RSA Coast petition at the time of printing the documents to deliver to the SLR offices. At time of writing, this the number now stands at **458932 signatures**.

In the interests of brevity these documents can be found at this link:

[<https://www.dropbox.com/scl/fo/qdfmlgicf2flke2733j1s/h?rlkey=rfqu3r4i829u2l8ajsyzroh6&dl=0>]

- b. Countless marches and demonstrations along the coastline, NGO work, assemblies, formation of environmental groups, have expressed themselves against the survey operations since the plans for CGG reconnaissance projects along the East Coast were announced; and which had its maximum expression in a national coastwide march [during this month](#) (Dec 2023)
- c. The DG has failed to consider the three court cases related to offshore oil and gas to date, taking the ministers (DMRE and DFFE) and developers to court to demand the minister engage the 'No-Go' option to stop development before it starts. The applicants represent a large number of communities and organisation and they span South Africa's coastline (North East, East and West Coasts):
 - i. *South Durban Community Environmental Alliance et al. V Minister of Environment, Forestry and Fisheries & Others*, (2021, June 14) Case No. 29433/21 in the High Court of South Africa Gauteng Division, Pretoria;
<https://drive.google.com/file/d/12loY5RLGd0CGRoMrc2pn7kt4yohkCWxS/view>

<p>ii. <i>Sustaining the Wild Coast NPC and Others vs. Minister of Mineral Resources and Energy and Others.</i> (2021, December 28) Case No. 3491/2021 in the High Court of South Africa Eastern Cape Division, Makhanda/Grahamstown. https://cer.org.za/wp-content/uploads/2021/12/SWC-v-Shell-Wild-Coast-Seismic-Blasting-Interdict-28.12.2021.pdf</p> <p>iii. <i>Christian John Adams & Others v Minister of Mineral Resources and Energy & Others.</i> (2022, March 1) Case No. 1306/22 in the High Court of South Africa Western Cape Division, Cape Town. https://cer.org.za/wp-content/uploads/2022/03/Adams-and-Others-v-Minister-of-Mineral-Resources-and-Energy-and-Others-ZAWCHC-24.pdf</p>		
<p>4. FAILURE TO CONSIDER REASONABLE APPREHENSION OF REAL HARM TO MARINE LIFE</p> <p>Port Elizabeth Corals Marine Protected Area</p> <p>a. The Director General has not given proper consideration to the fact that this seismic survey will completely surround the Port Elizabeth Corals Marine Protected Area, a significant portion of the endangered Kingklip Corals and kingklip spawning grounds.</p> <p>b. The survey will take place during autumn, when colder upwellings trigger kingklip breeding and when they attract breeding partners using sound. The DG has failed to consider the consequences of chronic noise in the water during this critical life history period for kingklip.</p> <p>c. Japp & Sink (2021, 13) highlight that kingklip are “<i>negatively affected by the pressure waves associated with noise-related</i></p>		

impacts” and comment that, “crew working on the support vessels for oil and gas rigs on the Agulhas Bank report that ‘stunned’ kingklip often rise to the surface when activities with a high-acoustic signal are undertaken”. They warn that increasing ocean noise is compounding cumulative effects on our marine resources, and that this impact on our fish species, as well as the habitats they occupy, should not be underestimated. It appears that the DG was not informed of this ‘stunning effect of kingklip’, which consequently was not taken into account in his decision.

- d. Although a 5km buffer around the MPA is recommended, the sound impact modelling was largely within a 2km buffer. In the face of the uncertainty of what serious or irreversible damage 5 months of ensonification of the endangered ecosystem type along Kingklip Ridge and the overlap with major fish spawning and migration routes, might produce; the DG should have applied a precautionary approach.

African Penguin (*Spheniscus demersus*)

- e. South Africa’s critically endangered African Penguin has been shown to avoid its preferred feeding areas during seismic surveys, feeding further from the survey vessel when in operation (Pichegru *et al.* 2017).
- f. With a 70 % decline in their numbers since 2004, and commercial fishing changing and decreasing their fish stocks in the vicinity of their breeding colonies, these seismic surveys pose an undeniable risk of further increasing fish scarcity, thereby increasing foraging ranges with implications for individual and population fitness for the African Penguin.

Zoolplankton

g. The DG has relied for his decision upon an outdated study, Richardson et al, (1995), used in the BAR showing that “any effects on zooplankton by seismic noise would endure in the very short term only”, hence the EAP irrationally suggests that biomass recovery could occur in three days.

In 2017, McCauley et al., showed that marine seismic survey air gun operations can kill large swathes of plankton, the basis of the marine food chain, up to 1.2km from the sound source. Within the study area, zooplankton abundance dropped by two-thirds. Furthermore, all larval krill, the primary food source of whales, were killed. Considering the scale of the CGG survey area (12 750kms), the current which can move at meters per second, and the increase in biomass distribution in this area, it would therefore have been prudent that up-to-date and evidence based science be considered.

Both the DG and the EAP ignored these recent studies brought to their attention by objections.

h. Given that plankton are a keystone species in the marine ecosystem, the DG has not given adequate consideration to the duration of impact. The length of time a particular area is surveyed influences the degree of impact.

i. Cognisance should have been taken of cascading effects of causing harm to one group inevitably causing harm to all groups , which could prove immensely and profoundly detrimental to the marine environment.

Sea Turtles

<p>j. Significant impacts on turtle species remain a concern. Both loggerhead and leatherbacks are known to migrate through and occur within the survey area. Leatherbacks inhabit deeper waters and have a moderate ability to avoid areas with an increase of noise in the water, but they can dive to depths over 600 m and remain submerged for up to 54 minutes (Hays et al. 2004). Mitigation measures for turtles in seismic surveys which include observers is not mitigation when it is impossible to see these animals 800m away from the vessel, at any given time.</p> <p>According to NEMA and the fact that the impacts of seismic surveys in South African waters are largely unknown, the precautionary principle or risk adverse approach should have been applied in this case. The international scientific literature has demonstrated that this activity can cause significant harm to the marine environment and in the current absence of acceptable knowledge it is more than appropriate to suspend these surveys until the appropriate knowledge is obtained through South African based research, or at least until mechanisms are defined, outlined and put in place to resolve this knowledge gap.</p>		
<p>5. IMPACT ON LIVELIHOODS ASSESSMENT FATALLY FLAWED</p> <p>a. The DG did not properly consider representations from I&APs that the BAR fails to provide a sufficient evidentiary base to answer key questions around mitigation of impacts on commercial fishing. The permit conditions state that “Key squid and commercial fish spawning periods” are to be avoided, but the breeding season for Kingklip is during autumn, the time for when the surveys have been authorised. Furthermore, this mitigation does not account for overlap with other commercial fisheries, e.g.</p>		

demersal trawl fisheries

- b. Kingklip remain one of our most commercially important fish stocks and fisheries and an ecosystem-based approach is required where the approach to management of this fishery and other sectors should focus on sustainable harvest as well as a continued effort to collect data on the behavior of such species in relation to noise. Studies should preferably enable an evaluation of how the measured effects of noise could disturb the population, stock, or habitat as a whole, *before* proceeding with invasive seismic operations.
- c. The report lists the impact on fishers as “no impact,” because the survey is far offshore, yet it fails to consider the large-scale effects seismic testing has on these communities and catch rates. By excluding subsistence fisherfolk from the impact assessment, the report fails to provide a comprehensive analysis of affected communities, rendering the report fatally flawed and cannot serve as a lawful, reasonable and/or rational basis upon which a decision on authorisation could have been made.
- d. From the annual South Africa squid catch data, there is a potential correlation between seismic surveys and drop in squid jig catches (Russell, 2018, 98). Squid (chokka, *Loligo reynaudi*) are short-lived species and there are serious concerns about the impact of low frequency seismic airgun sounds on squid, where squid can die or suffer severe organ damage. Consultant to the Responsible Fisheries Alliance, David Russell, warns that larvae and juveniles may also be more susceptible to the harm of underwater noise than adults, possibly jeopardizing the sustainability of populations. The BAR fails to recognise the significant risk to this fishery this survey therefore poses.

<p>e. The BAR fails to acknowledge impacts on many migrating species, such as elf/shad, tuna and geelbek- key catch for subsistence and small-scale fishers, which utilise the Agulhas current, at the time of the survey.</p> <p>f. The Blue Economy is framed as a tool which can assist in addressing poverty and food security issues while building social and economic resilience in developing economies. The '<i>oceans as livelihoods</i>' movement does not allow for the current irresponsible and unacceptable short-term goals which the pristine marine areas are expected to succumb to, in the pursuit of a fossil fuel.</p> <p>g. There is still the very real risk of displacement from feeding or breeding areas which could have far reaching effects not only for whole, and vulnerable, animal populations, but also on 12 fishing sectors and our food security. It remains for CGG, DMRE and PASA to show long-term economic benefits for the local community resulting from this project.</p>		
<p>6. FAILURE TO ASSESS REPEATED, PERSISTENT OR CUMULATIVE EXPOSURE IMPACTS TO SPECIES</p> <p>a. The DG may have been convinced by the BAR that the ocean is already such a noisy place that additional noise should be of no concern, this is incorrect and an attempt to down-play the severity of the sound generated by these surveys.</p> <p>The reversal of noise was demonstrated in 2020, while 60% of the globe was in lockdown and a 20% reduction in oceans noise, the response was also almost instantaneous, where large marine animals began coming closer to shore and claiming back their ancestral territory (Duarte et al, 2021).</p>		

<p>b. The BAR failed to properly consider how the adverse effect of continuous noise exposure may intensify and last for a considerable time after the termination of the sound source with a proper sound impact assessment of the ridge’s profile and inland ‘amphitheatre’.</p> <p>c. Neither stress nor maladaptive neuroplastic changes within the central auditory pathway symptomatic of noise exposure induced tinnitus in marine animals are broached.</p> <p>Stress in marine mammals related to anthropogenic noise exposure has been conclusively proven (Wright et al., 2007).</p> <p>Significant stress due to prolonged exposure to seismic and anthropogenic underwater noise has been measured in a number of species (Finneran et al., 2002; McCauley et al. 2003; Rolland et al. 2012). These studies indicate cumulative effects could result in metabolic maladaptation, suppressing growth, immune system function, thermoregulation and the reduction of reproductive rates, with implications for individual and population fitness. The DG has not taken into account the chronic problems of this kind of stress and are a legitimate but has been disregarded as a conservation concern in this Authorisation.</p> <p>d. The BAR understates the compounding abiotic and biotic stressors associated with the frequency and enormous extent of the multi-client 3D surveys and exploration planned for 2024 and onwards. Parsons et al.(2009) warn that some of the more insidious and potentially devastating impacts arise through long-term, repeated, persistent or cumulative exposures. The risks associated with compounded behavioural disturbance and how chronically-present sound could constitute a threat to populations by changing behaviour and distribution regularly at</p>		
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critical times and in critical areas.		
<p>7. FAILURE TO ADEQUATELY ASSESS THE NEED AND DESIRABILITY OF THE PROJECT</p> <p>a. The DG has failed to carefully interrogate claims of this project to serve the ‘public interest’, by identifying gas reserves which will act as a ‘transition fuel for the country up to the 2030’.</p> <p>i. The DG should be aware of the timeframes needed for exploration and production offshore. Total’s Brulpadda exploration right is the only one in the process of the transitioning to a production right (D.F.F.E. 2023) at time of writing. The need and desirability of this project is based on a false assumption that gas will come onstream for commercial production before 2030, which risk inconsistency with the South Africa’s binding carbon budget peak-plateau-decline emissions trajectory, pushing peaking well past Net Zero in 2050. The EA decision therefore fails to conform to the National Environmental Management Act principles of sustainable development, and warrants review.</p> <p>ii. The BAR presents gas as a ‘bridge technology’ but severely overlooks gas lock-in potential and related emissions, which could complicate and decelerate energy transitions as more countries reach a more advanced phase of the energy transition. In fact, using natural gas as a substitute for coal can lead to negative climate consequences due to so far underestimated life cycle emissions (Howarth 2014), delay of a climate neutral energy system and lock-in of a large-scale carbon-intensive infrastructural build, which could undermine long-term climate goals.</p>		

<ul style="list-style-type: none"> iii. The BAR fails to define how discovered gas will prove competitive to South Africa’s energy market. iv. The BAR has not properly established a rational need for a seismic survey operation, apart from those that serve the oil and gas industry’s need for a better understanding of potential reserves. b. The BAR fails logically, by confusing the direct outcomes of the CGG seismic survey project with commercial production. The survey will not add to the “diversification of the South African energy mix”. This potential impact would depend on the commercial development of the field and, as such, is beyond the parameters that were established for this BAR. It would be suitable for a BAR directed at the commercial exploitation of the field, however, all the other impacts would have to be assessed using the same parameters and criteria. c. There is only one reason to explore for oil and gas and that is to use it once found. Once consumed, the increase in produced GHGs will significantly impact South Africa’s emissions budget. Scientific conclusions regarding the effects of oil and gas production on global warming are unequivocal: <ul style="list-style-type: none"> i. Developing new oil and gas fields is 'incompatible' with limiting temperature rises to 1.5°C, evident in the IPCC’s 2022 report (Pörtner et al 2022), resolute that global oil and gas production and consumption must decrease by 29% by 2030 and that new oil and gas development and exploration must end immediately. These findings are supported by the IEA’s Net-Zero by 2050 report , which states that emissions from oil and gas must decline by 65% by 2050. 		
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<p>ii. South Africa has international commitments to the United Nations Framework Convention on Climate Change (UNFCCC) 1997, the Kyoto Protocol 2002, the Paris Agreement on Climate Change 2016, Global Biodiversity Framework adopted at COP15 in Montreal 2022, that are incompatible with the long term purpose of this reconnaissance activity.</p> <p>iii. There are existential issues at play that cannot be easily undone. It is trite that alternative sources of renewable energy could replace the reconnaissance for, and consumption of fossil fuels, whilst spurring economic growth in the urgent matter of cutting greenhouse gas emissions (Valli Moosa, deputy chairman of the Presidential Climate Change Coordinating Commission).</p> <p>iv. It is also trite that there are strategic and economic reasons to re-evaluate identifying oil and gas resources with a view to further exploration and production (International Institute for Sustainable Development, 2022). These reasons include international gas phase-out pressure; reduced funding, increased cost of capital, carbon tax, trade taxes, etc. and that gas-functions in the electricity sector are already outcompeted, or expected, based on trends (Halsey et al 2022).</p> <p>d. Offshore hydrocarbon reconnaissance whose ultimate aim is the consumption of oil and methane gas in the years to come, is no longer a practice in societal development. The Scientific Advisory Group on Emergencies (SAGE), Academy of Science of South Africa (ASSAf) have weighed up the systemic risks of this aim as it relates to ocean systems and the climate crisis showing that it will increase climate harms,</p>		
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<ul style="list-style-type: none"> i. altering winds, water temperatures, sea ice cover and ocean circulation (Moore et al 2018, Cheng, 2019); ii. ocean acidification, which is now irreversible for centuries to come (Poloczanska et al 2018, Feely et al 2010, Zeebe & Wolf-Gladrox 2001), iii. altering the physiological functioning, behaviour, biological interactions, and productivity of organisms, which, in turn, could lead to shifts in marine life size structure, spatial range, seasonal abundance, community structure and ecosystem function (Doney et al 2012); iv. transferring nutrients from surface waters down into the deep ocean, leaving less at the surface to support plankton growth (Zhongming et al 2018); v. potentially suppressing marine biological productivity for a millennium (Halsey et al 2022); vi. ultimately destroying the fisheries and marine tourism industries of all countries, including South Africa, resulting in devastating job losses, food insecurity, and other adverse socioeconomic consequences (Pörtner et al 2022) <p>plus increase economic costs, and injustice will undermine the immediate realisation of viable alternatives (Singh. J et al, 2022). Ongoing threats from ghg emissions include,</p> <ul style="list-style-type: none"> vii. ocean deoxygenation (Hausfather 2019) viii. sea level rise (Pachauri & Reisinger 2007) <p>Impacts on coral reefs from marine heat waves (1980 to 2020) encompass 34,846 coral bleaching records from 14,405 sites in 93 countries (van Woesik & Kratochwill 2022). Since coral reefs create</p>		
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<p>coastal protection, which provides food and income to humans, their destruction has systematic consequences. The top part of the ocean is warming up 24% faster than it did a few decades ago, and this is accelerating.</p> <p>With this climate science as the actual baseline for this project, it is clear that there is no “need’ for this project in terms of the broader societal/ public interest nor in terms of the well-being of future generations. In fact, due to South Africa’s sensitivity to climate impacts (and the BAR has not acknowledged that climate change is likely to have a significant impact on South Africa’s economy) there is a categoric need not to pursue the project.</p>		
<p>8. FAILURE TO RECOGNISE DEGREE OF SIGNIFICANCE OF HERITAGE RESOURCES</p> <p>a. In South Africa the sea is integral to the culture, tradition, religion and livelihood of many of its peoples. The DG has not applied his mind to the dispossession which covers the loss of the incorporeal experienced by local communities. Concerns regarding impacts to intangible heritage were evident in both these recent cases, of which the DG will be aware:</p> <ul style="list-style-type: none"> i. Gongqose V Minister of Agriculture, Forestry and Fisheries (2018) 5 SA 104 (SCA) ii. South Durban Community Environmental Alliance et al. V Minister of Environment, Forestry and Fisheries & Others, (2021) Case No. 29433/21 iii. Sustaining the Wild Coast NPC and Others V Minister of Mineral Resources and Energy and Others. (2021) Case No. 3491/2021 		

<p>iv. Christian John Adams & Others v Minister of Mineral Resources and Energy & Others. (2022) Case No. 1306/22</p> <p>b. The above cases hinge/d on the failure to recognise how integrated coastal communities are with the sea and their lack of inclusion. South Africans have the constitutional right to protection of their heritage and culture. Communities stand to lose <i>“their intangible possessions; ancestral connection, identity, heritage and belonging because of mining”</i> (Skosana, 2022).</p> <p>c. The suggested vacuous mitigation measures fail to recognise the degree of significance of heritage resources through gross simplicity which makes a mockery of spiritual and cosmological value that the sea holds for coastal, fisher, indigenous and First People communities.</p> <p><i>“Implement, where necessary based on the outcome of the consultation process, a ritual event(s) that permits engagement with ancestral spirits and loving communities to alleviate potential and future negative impacts of non-consultation and poor cultural/nature respect.</i></p> <p><i>Implement a gender sensitive ritual event in each region that recognizes gendered coastal cultural heritage to permit all genders to articulate their cultural relation with the sea and coast.” p.26</i></p> <p>This project has served unjustly as a rationale for halting livelihoods in times of economic difficulty and impacting stakeholder marine-related intangible cultural heritage. The effects to their intangible heritage and relation to the sea remain,</p>		
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whether impacts occur close or far from shore.		
For all the reasons stated above, it is our submission that the appeal should succeed and that the proposed exploration must not be permitted to proceed.		

ARR comments by Case Officer

Approved by Supervisor

Name & Surname:

Name & Surname:

Date:

Date:

Signature:

Signature:

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