



**ONR – NGO Forum  
Video conference meeting  
23 September 2020 (1400-1630)**

**Office for Nuclear Regulation present:**

Adrienne Kelbie (AK) – Chief Executive (ONR co-chair)  
Mark Foy (MF) – Chief Nuclear Inspector  
Mike Finnerty (MFin) – Deputy Chief Inspector and Director, New Reactors Division  
Paul Fyfe (PF) – Deputy Chief Inspector and Director, Civil Nuclear Security & Safeguards  
Katie Day (KD) – Policy and Communications Director  
Jo deBank (JdeB) – Senior Communications Manager

**Environment Agency:**

Alan McGoff (AM) – Nuclear New Build Lead

**NGO representatives present:**

Dr Jill Sutcliffe (JS) – Low Level Radiation and Health Conference (NGO co-chair)  
Katy Attwater (KA) – Stop Hinkley  
Sue Aubrey (SA) – Stop Hinkley  
Dr Ruth Balogh - West Cumbria and North Lakes Friends of the Earth  
Peter Banks (PB) – Blackwater Against New Nuclear  
Prof. Andy Blowers (AB) – Blackwater Against New Nuclear  
Jo Brown (JB) – Parents Concerned About Hinkley  
Peter Burt (PBurt) – Nuclear Awareness Group/Nuclear Education Trust  
Paul Collins (PC) – Stop Sizewell C  
Neil Crumpton (NC) – People Against Wylfa B  
David Cullen (DC) – Nuclear Information Service  
Rod Donington-Smith (RDS) – Cumbria Trust  
Rita Holmes (RH) – North Ayrshire Radiation Monitoring  
Allan Jeffery (AJ) – Stop Hinkley  
Tor Justad (TJ) – Highlands Against Nuclear Transport  
Dr David Lowry (DL) – Nuclear Waste Advisory Associates  
Sean Morris (SM) – Nuclear Free Local Authorities  
Ian Ralls (IR) – Friends of the Earth Nuclear Network  
Pete Wilkinson (PW) – Together Against Sizewell C  
Chris Wilson (CW) – Together Against Sizewell C

**Secretariat:**

Daniel Jones – ONR Communications Manager

**1 WELCOME AND INTRODUCTIONS**

- 1.1 Dr Jill Sutcliffe (JS) began by welcoming all attendees to the meeting and explained how the meeting would run. JS proceeded to invite all attendees to introduce themselves.

- 1.2 Prof. A Blowers (AB) informed the meeting that he and other NGOs were aware of some recent issues between Dr David Lowry (DL) and ONR. AB explained that efforts had been made to rectify the situation, emphasising that NGOs value DL's participation on the Chief Nuclear Inspector's Independent Advisory Panel (IAP) and hope he will be able to continue in that role as a full and valid member.

## 2 UPDATE FROM THE CHIEF NUCLEAR INSPECTOR

- 2.1 Mark Foy (MF) welcomed all attendees to the meeting and commenced by providing an update on the recent ONR decision to permission the restart of Hunterston B Reactor 3. He explained that ONR had given permission for the reactor to operate for approximately six months (up to 16.425 Terawatt days). MF advised that ONR had engaged extensively with EDF NGL and was satisfied that the reactor was safe to operate and could be safely shutdown, including under fault conditions.
- 2.2 MF explained that other Advanced Gas-cooled Reactors (AGRs) in the EDF NGL fleet were also likely to experience \*keyway root cracking. He emphasised that ONR would assess the safety case of each reactor individually.
- 2.3 MF confirmed that ONR is expected to make a decision in the coming days on the return to service of Hunterston B Reactor 4. He explained he could not speculate on that decision but did advise that NGO Forum members would be notified when the decision was announced. **[Post meeting note – On 24 September 2020, ONR gave permission to EDF NGL for Reactor 4 at Hunterston B to return to service for up to a total of 16.25 Terawatt days, which is approximately six months operation. NGO Forum members were advised of this decision on 24 September 2020.]**
- 2.4 MF advised that ONR had informed the Atomic Weapons Establishment (AWE) that it was to be prosecuted, following an electrical incident. He confirmed that the court hearing is scheduled to take place on 7 December 2020.
- 2.5 MF informed the meeting that ONR had also recently issued Devonport Royal Dockyard Ltd. (DRDL) with an Improvement Notice, relating to the maintenance of certain pieces of equipment. He added that ONR had been working hard to ensure that the right organisations and seniority were working together to make the right, informed decisions and deliver appropriate outcomes at DRDL and across the defence nuclear estate also ensuring that our regulatory expectations are clearly understood.
- 2.6 MF confirmed that in relation to the proposed Sizewell C development, ONR had now received a nuclear site license application from NNB Generation Company (SZC) Limited. He explained that ONR would need to be satisfied regarding the capability of the organisation and its ability to take full and proper ownership of a nuclear site license and the legal duties that it places on the license entity.

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\* Keyway root cracking - this is considered to be the likely phenomenon that will ultimately limit the lifetime of most of the AGRs. The origin of keyway root cracking is caused by the graphite at the outer surface of the bricks moving into tension due to changes in the internal stress of the brick. This mechanism can only occur later in life as it is dependent on the total amount of irradiation received by the graphite. It can consequently progressively crack many bricks across the core.

- 2.7 MF advised that ONR's assessment of the UK HPR1000 reactor design was now in Stage 4 of ONR's Generic Design Assessment and that we (ONR) expected to complete GDA in early 2022. He also confirmed that ONR expected to receive a site license for Bradwell B in 2022.
- 2.8 MF confirmed in relation to recent press reports that he understood Hitachi would be withdrawing from the UK nuclear market. He advised that ONR staff had stopped working on the Wylfa Newydd project around 18 months ago, so the decision to withdraw from the UK market would have little impact on ONR.
- 2.9 MF proceeded to provide a breakdown of the various enforcement actions taken since the last meeting of the Forum in June.

**Action 20.09** – Sean Morris (SM) asked if it would be possible to see a copy of the ONR Enforcement Letter issued to a transport operator.

**[Post meeting note (Action 20.09) – Copy of letter shared with Sean Morris on 26 October 2020.]**

- 2.10 In response to a request from NGOs to provide an update on changes announced at Public Health England (PHE)<sup>†</sup>, MF confirmed his current understanding was that the radiological functions that are part of PHE would transfer over to the new body. He confirmed that ONR had no significant concerns regarding the proposed changes but would continue to maintain an interest in what happens. He advised that it is likely there will need to be some subsequent changes to the Health & Safety legislation which could take some time to make.
- 2.11 MF updated NGOs on ONR site attendance during the COVID-19 (coronavirus) pandemic. He advised from the outset of the pandemic ONR had stepped back from visiting sites in order to protect the well-being of its staff and to help protect local communities and the people working on licensed sites. He confirmed that ONR had already begun to gradually increase its on-site presence and that we (ONR) intend to continue visiting sites at least once a month as a minimum during the pandemic, including during any subsequent peaks in transmission, except decommissioning and other low hazard sites where site attendance is normally less frequent, and subject to any local and national control measures that maybe introduced.
- 2.12 MF updated on some recent events which occurred at Sellafield. He advised that electrical storms in August had affected steam supplies at the site, which had resulted in controlled shutdown of some facilities. He also advised that during routine checks of a stored chemical, it had been identified as being potentially unstable and was disposed of securely.
- 2.13 MF explained that the decision made by West Berkshire Borough Council regarding the new Detailed Emergency Planning Zone (DEPZ) around the AWE Burghfield site was being legally challenged. MF explained that ONR no longer has any formal role in the determination process for DEPZs around nuclear licensed sites under REPIR 2019 and no role in planning applications or submissions.

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<sup>†</sup> Earlier this year PHE published a Health Impact Assessment: 'Research on Health Impact Assessments (HIA) in planning practice in England.' This is 20 years since a similar document was drawn up by NGO co-chair Dr Jill Sutcliffe.

- 2.14 MF confirmed that his next CNI annual report would be published in November and would focus on: ageing facilities; health and safety performance; holistic approach to regulation; and COVID-19. MF advised that ONR needs to be satisfied that industry is capable of dealing with a much more onerous pandemic scenario, given the credibility demonstrated by COVID-19.
- 2.15 Rita Holmes (RH) asked if further reports would be published following the announcement regarding the decision to permission the restart of Hunterston B Reactor 3.
- 2.16 Katie Day (KD) confirmed that it was ONR's intention to publish the four Assessment Reports. KD confirmed that ONR would notify RH once this had been done.

**Action 20.10** – ONR to notify RH once Assessment Reports have been published.

**[Post meeting note (Action 20.10) – ONR published the four Assessment Reports relating to the Hunterston B Reactor 3 return to service decision on 24 September 2020. RH notified by email on 24 September 2020. Wider NGO Forum members notified on 29 September 2020 as part of the regular update note.]**

- 2.17 RH asked if Reactor 3 could operate beyond six months if EDF NGL chose to operate the reactor at lower power. RH also asked if this was the case, had EDF NGL indicated to ONR if they planned to do this.
- 2.18 MF advised that if operated at lower power then the reactor could operate beyond six months, but not beyond the core burn up limit of 16.425 Terawatt days. He advised that he was not aware of EDF NGL's plans regarding the level of power which they intended to operate the reactor at.
- 2.19 Katy Attwater (KA) raised the issue of a Geological Disposal Facility (GDF). KA said that the Parliamentary Committee that reviewed Tony Blair's decision to launch the UK's New Nuclear Programme placed the condition on it that a GDF had to be built. KA advised that New Build activities were proceeding with no GDF in sight. KA asked how ONR feels about approving activities with no facility to store the waste.
- 2.20 MF advised that the whole nuclear industry has developed plans based on a GDF being constructed. He confirmed that industry programmes and plans were predicated on a GDF being built. MF explained until such time as it becomes clear that a GDF won't be available in the planned timescales, it is difficult for ONR to take further action. He confirmed ONR continues to engage with government on this matter.
- 2.21 KA commented that there is no decision-making structure, asking how does a GDF offer a solution. She expressed the view that the BEIS Minister, Nadhim Zahawi, who she had spoken with about this issue lacked understanding. KA advised from an NGO perspective it is concerning as it seems the issue is being "kicked along".
- 2.22 MF responded by confirming that ONR would ensure concerns were raised if ONR felt the timescales around the construction of a GDF were unrealistic.

- 2.23 Peter Burt (PBurt) commented that it was disappointing to hear the news about the defence sector, given the work ONR had done to try and build defence nuclear safety. PBurt asked if MF felt safety was improving.
- 2.24 MF acknowledged that he was also disappointed with some of the shortfalls and breaches of safety at certain sites. He commented that ONR was working to ensure AWE addressed the safety issues, and that part of ONR's interventions were intended to make sure we (ONR) are satisfied. MF advised that he believed that the latest changes to the AWE leadership team would help improve the culture and safety performance, which would be better for the site. He also advised that ONR had seen marked improvements in leadership and safety at DRDL, but we (ONR) needed to understand the cause of the recent shortfall that led to the issuing of an Improvement Notice, in order to help influence continuous improvement.
- 2.25 PBurt in relation to the legal challenge concerning the DEPZ around the AWE Burghfield site, asked if ONR was able to provide further details about the developer and the particular piece of land.

**Action 20.11** – ONR to provide PBurt with further details concerning this matter.

**[Post meeting note (Action 20.11)** – KD wrote to PBurt on 2 October 2020 and provided the further information requested.]

- 2.26 PBurt commented that this was an important decision and 'marker' in the effectiveness of REPPiR 2019. PBurt asked if ONR would resist attempts to remove land from the DEPZ (decision made under REPPiR 2019).
- 2.27 MF advised that ONR recognise the significance of the case and as an 'interested party' are supporting the review.
- 2.28 Peter Banks (PB) commented that there was still no site license company for the proposed Bradwell B development and requested an update on this.
- 2.29 MF advised there were a number of organisations involved, but no single entity had yet been 'stood up'. He confirmed that there is currently no substantive organisation that ONR would be willing to licence with regards to the development.
- 2.30 Dr Ruth Balogh (RB) thanked MF for his comments on GDF and requested clarification on the proposed timescales.
- 2.31 MF advised that his current understanding was that a GDF would be available to take higher activity waste in 2042 and would be available to take spent fuel in 2075.

**Action 20.12** – ONR to confirm current working assumption dates to NGO Forum.

**[Post meeting note (Action 20.12)** - In NDAs 2016 Higher Activity Waste Strategy: for ILW in England and Wales the planning assumption is that a GDF will be operational from 2040; for HLW the planning assumption is that a GDF will be operational from 2075. The NDA document is due for reissue in 2021.]

2.32 Pete Wilkinson (PW) commented in relation to the SZC site license application, that the developer had no money, that the consultation was inadequate, and that the site was unsuitable. He asked why ONR couldn't just say no to the development. PW also asked for ONR's view on a recent report he had co-authored on behalf of the charity 'Children with Cancer UK' (CwC) regarding cancer rates amongst children.

In relation to a GDF, PW asked how this could be viewed as a permanent solution for the storage of waste.

2.33 In relation to PW's first point, MF advised that as part of ONR's assessment of the site license application, ONR would look at an organisations capability to fulfil the legal obligations that would be placed on it, including compliance with the licence conditions that would be attached to a nuclear site license. MF explained that ONR would look at all the areas mentioned by PW as part of the assessment of the SZC application.

2.34 Mike Finnerty (MFinn) also confirmed that ONR would look at the local site conditions as part of the assessment of the site license application.

2.35 PW commented that more evidence wasn't needed and asked when ONR would reach a decision on the application.

2.36 MF advised that generally he would expect the assessment of the site license application to take around two years to complete. With regards to the other point on the CwC report, MF advised that this was not matter he could comment on.

2.37 Responding to PW's point about GDF, MF advised that nuclear industry plans are predicated on a GDF being available. He advised that it is intended that ONR would regulate the safety and security of such a facility and similar to other new build projects we would consider the evidence and detailed design substantiation of any intended GDF when determining whether it was safe. MF confirmed that GDF is not currently a licensable activity, but it would be brought into scope.

2.38 David Cullen (DC) asked in relation to the legal challenge to the DEPZ set by West Berkshire Borough Council (WBBC), if the Nuclear Information Service would be able to put in a submission to the review. DC asked if ONR would be able to provide the details of who he could approach at WBBC.

**Action 20.13** – ONR to provide WBBC contact details to David Cullen.

**[Post meeting note (Action 20.13) – Details shared by ONR with David during video conference on 23 September 2020.]**

2.39 Ian Ralls (IR), in relation to graphite cracking, asked how the breakdown could be predicted.

2.40 MF advised that the methodology was complex, was based on material properties, inspections results, analysis and modelling. He added that ONR have inspectors that are graphite experts that have assessed the EDF NGL safety case in detail, which is in turn supplemented by our own independent source of graphite specialists. MF confirmed that it is ONR's expectation that all control rods could be safely

inserted into the reactor core to shutdown the reactor during normal and fault conditions.

**Action 20.14** – ONR to share with NGO Forum members the regulatory Assessment Reports which provide greater detail on ONR’s assessment of the modelling used to predict graphite cracking.

**[Post meeting note (Action 20.14) – DJ wrote to NGO Forum members on 29 September 2020 to share Assessment Reports.]**

- 2.41 SM commented that when ONR announced the decision regarding Reactor 3, EDF indicated that they would like to operate the reactor for a further six months beyond the current operating period.
- 2.42 MF advised that ONR is content that EDF NGL has provided an adequate safety case for the indicated core burn-up and associated period of operation this would allow. He confirmed that at the end of the current period of operation, further inspections will need to be carried out and EDF NGL would need to submit a new safety case, considering the inspection data, to ONR for any further core burn-up beyond the current permitted 16.425 Terawatt days.
- 2.43 AB commented that GDF was more relevant to legacy waste. He also advised that in his view, when it comes to New Build, a lack of a GDF is a big issue. AB advised that we don’t know what the conditions will be in the future, so asked should we be pursuing New Build activities, as we don’t know what we will do with the waste.
- 2.44 AB commented on the UKHPR1000 hybrid cooling technology and asked if site licensing was looked at as part of step 4 of the GDA process, given that the proposed location for this reactor type is known.
- 2.45 MF advised that the GDA process was developed for fleet wide operation. He explained that the UKHPR1000 requesting party had not requested a site specific GDA, but instead had requested a generic design assessment. MF confirmed that ONR would not look at detailed site specific design matters as part of GDA, it would be undertaken when the Pre-Construction Safety Case (PCSR) was submitted for the designated site, where the UKHPR1000 would be deployed.
- 2.46 In response to AB’s earlier comment (2.43), MF confirmed that a GDF does need to be delivered in order to store legacy waste.
- 2.47 Paul Collins (PC) asked if Sizewell C site licensing was a couple of years away, will ONR not be providing an assessment before the examination (planning) finishes.
- 2.48 MF advised that it does take 18 months or longer to undertake our review of the site license application. He explained that ONR needs evidence that there is a competent body in place which is a legal requirement. He also explained that the suitability of the site would be looked at as part of the site licensing application.
- 2.49 PC added that in his view the main issue will be the suitability of the site. MF confirmed that ONR’s assessment looks at many different factors in determining the suitability of the site.

- 2.50 Chris Wilson (CW) noted that at Sizewell B (SZB) EDF NGL had turned off one of the two turbines and asked for ONR's view on this. CW also asked if the Environment Agency were carrying out an investigation into the silo collapse at Hinkley Point C.
- 2.51 MF confirmed that ONR was aware that SZB was only using one turbine. He explained that this mode of reduced power operation is permissible under the safety case, but for a limited period, after which full power operation would need to be restored or the reactor shutdown.
- 2.52 Alan McGoff (AM) advised that the Environment Agency (EA) was not investigating the silo collapse at HPC, as this was a matter for ONR. AM explained this did not fall within EA legal vires.

### **3 HINKLEY POINT C (HPC) UPDATE**

- 3.1 MFinn Deputy Chief Nuclear Inspector and Director of ONR's New Reactors division, delivered a presentation which covered the following areas: ONR's current regulatory presence at HPC; silo collapse event which occurred in June; and areas of ONR focus at the site.
- 3.2 MFinn outlined four of the general principles that ONR was following with regards to on-site interventions at the HPC site, which include: obtaining assurance on key areas of compliance, particularly those associated with construction activities; to inform decisions to permit on-going construction; conduct investigations where the work can't be done remotely; and to gain independent assurance of supply chain activities. MFinn advised ONR would also coincidentally continue to seek assurances regarding compliance with PHE and government guidelines on protection measures considering the current pandemic.
- 3.3 MFinn advised that between the beginning of the lockdown period and June, ONR completed two on-site inspections at HPC and eight remote inspections. He confirmed since July there has been a gradual increase in ONR presence on the site.
- 3.4 MFinn advised that in relation to the silo collapse, ONR was awaiting the outcome of the licensee's own investigation, which would provide a source of evidence to help inform ONR's regulatory response. He explained that evidence gathering was a painstaking process and took time. MFinn added that it was still too early to speculate on the causes of incident, and that ONR would form an independent view on the causes of the incident once all evidence had been gathered.
- 3.5 MFinn confirmed that ONR was continuing to seek assurances that construction was progressing with the required levels of quality to meet nuclear safety and security standards. He also confirmed that ONR was focusing on ensuring equipment supplied to the site was manufactured to the right levels of quality, that site was continuing to give the right levels of attention to conventional safety matters, and on ensuring it was complying with COVID-19 public health guidelines.
- 3.6 Allan Jeffery (AJ) asked how a no deal Brexit would affect HPC. And PC asked who looked at the environmental impacts following the silo collapse.

- 3.7 MFinn confirmed that the silo collapse occurred on the licensed site and no material left the site. He advised that ONR did not consider there to be any radiological release from the collapse. He added that the dust cloud dispersed quickly, and that ONR did not believe there to be any environmental impacts from the collapse. AM advised that he did not believe it fell within EA vires to investigate the matter further, and that the incident was a health and safety matter.
- 3.8 KA suggested that there was little idea how this might have affected local people. PC added that if this occurred during the proposed construction of SZC the pollution could have an impact on the local wildlife.
- 3.9 In response to the question from AJ, MFinn advised that EDF had contingency plans in place for a no deal Brexit, but if it did have an impact on supply chain quality or on nuclear safety, ONR would take whatever regulatory action it felt was necessary. He advised that ensuring the supply chain was able to meet EDF NGL requirements should there be a no deal Brexit was ultimately a matter for EDF NGL and not ONR.
- 3.10 AJ commented that he read reports that suggested that due to COVID-19, EDF NGL had needed to collect parts from France. In his view EDF NGL were likely to have problems with the supply chain and workforce if there is a no deal Brexit and COVID-19 restrictions in place.
- 3.11 MFinn confirmed that ONR look at the quality of components and technical capability of the workforce, as part of its normal regulatory role.

#### **4 REGULATION OF CYBER SECURITY ACROSS THE CIVIL NUCLEAR SECTOR**

- 4.1 Paul Fyfe (PF) Deputy Chief Nuclear Inspector and Director of ONR's Civil Nuclear Security and Safeguards division, introduced his presentation by providing some background to the current international / national security regulations, and outlined ONR's approach to security regulation. He also provided further information on ONR's scope for regulating security; and explained that the security of radioactive sources held outside nuclear licensed sites, or nuclear premises operated primarily or exclusively by MOD or its contractors, were not within ONR's scope for the purposes of security regulation.
- 4.2 PF explained that ONR's approach to the regulation of cyber security was outcome focused. He advised that ONR ensures that dutyholders cyber and information security arrangements are aligned and coherent with broader security activities; that dutyholders have a mature understanding of their security risks, informed by current threat intelligence; that dutyholders are encouraged to implement an appropriate balance between cyber 'protection' and 'detection/response/recovery'; and that ONR expects dutyholders to undertake an intelligence-led programme of assurance activities including auditing, monitoring, and testing.
- 4.3 PF confirmed that ONR has doubled the size of its cyber security specialism, which is now overseen by a dedicated Professional Lead, and confirmed that ONR cyber inspectors work closely with other security and safety specialists within ONR to deliver comprehensive and effective regulation.

- 4.4 PF advised that cyber security is considered by ONR to be a fundamental security principle (No. 7) within our suite of Security Assessment Principles, and that ONR expects licensees to demonstrate all areas are adequately considered and provided for.
- 4.5 PF provided an overview of the graded approach to cyber security which ONR expects dutyholders to follow, explaining it is about ensuring security is proportionate to the risks. He also provided an overview of the good practice standards.
- 4.6 PF updated on the findings from the 2020 international Nuclear Threat Index (NTI) report. He confirmed that the UK performs very well in most areas, but commented that the report questions are very binary and he noted that scoring in the NTI report can be rigid e.g. expecting dutyholders to conduct annual penetration testing. PF advised that ONR's approach is different and adopts an intelligence-led programme of assurance activities.
- 4.7 PF concluded his presentation by providing an overview of some of the current and future challenges in relation to cyber security.
- 4.8 David Lowry (DL) asked how ONR ensures contractors working on plant operating equipment in the control room inside licensed nuclear facilities do not leave open a Virtual Private Network (VPN) link used to import software updating patches to an "island" hardware site otherwise not connected to the internet.
- 4.9 DL claimed that a security representative from Sellafield's security function had presented such a scenario at an external forum. DL suggested that any links left open, it could be possible to infect with harmful software.
- 4.10 PF responded by advising that he was not aware this had happened on a UK site but confirmed ONR would check.

**Action 20.15** – ONR to check if there has been a cyber-security incident on a UK site, which has occurred via the method described by DL.

**[Post meeting note (Action 20.15)** - ONR believes that the specific scenario mentioned at 4.9 did not occur within the UK. ONR is aware of a limited number of instances of contractor laptops being connected to operational technology (OT) for longer than was appropriate, although there was no onward connection to the internet or any other network. This was some years ago and resulted in changes to the dutyholders' procedures. There was no adverse effect on the OT involved and ONR has no evidence of any recent reoccurrences.

Any digital electronic equipment that needs to be connected to OT on a civil nuclear site must have been subject to a rigorous risk assessment and appropriate technical and procedural controls implemented

Relevant good practice for software updates is to use removable media that has been 'sheep-dipped' prior to going on to plant. ONR also expects adequate controls that ensure the integrity of the update/patch.

Where a laptop is brought on to plant a range of controls should be in place to ensure its integrity; it must have suitable antivirus with up to date definitions and the laptop must have been virus scanned within 24 hours of going on to site for example.

Notwithstanding the cyber security controls, nuclear facilities are required to have additional defence in depth measures such as detection software and fail-safe systems that do not rely on one specific technology.]

- 4.11 PBurt asked are there proposals for use of proprietary software in any nuclear developments involving Chinese partners (i.e. Huawei type risks), and what is ONR's position on this. He also asked if ONR have a position on whether it is appropriate for state enterprises from a nation actively involved in cyber warfare to have a major stake in a nuclear new build proposal.
- 4.12 PF confirmed that ONR works very closely with the National Cyber Security Centre (NCSC). He explained that ONR does not have a formal view on different technologies, adding that ONR takes its advice from the NCSC as the competent authority in these matters.
- 4.13 PBurt asked if ONR felt the Chinese state was fit to be part of the running of a power station.
- 4.14 PF advised that the involvement of Chinese companies/interests is a matter for the UK government. He confirmed that security requirements on dutyholders would be the same, no matter who ONR is regulating.
- 4.15 KA commented that NGOs were told that at HPC the Chinese were providing funding only, but it transpired they did have workers on site. KA asked how ONR monitors the security of personnel on site when the operator is Chinese.
- 4.16 PF confirmed that it does not matter what the nationality of staff, they still need to meet the vetting requirements. He added that the same process would be followed regardless of nationality.
- 4.17 KA commented that nobody seemed to know that Chinese workers were present on the HPC site, and asked on a site so big, how you can monitor the comings and goings of staff.
- 4.18 PF confirmed that ONR was certainly aware of this. He emphasised that all those accessing the site need to go through the vetting process. He confirmed that he was very confident that ONR would be able to access the details of all those who had entered the site and when they had done so. PF added that all dutyholders were required to have this information.
- 4.19 IR commented that if you're engaged in cyber-warfare, regulations will not be a major concern to you. AK advised that this was not a matter for ONR.
- 4.20 IR asked about the potential of Electromagnetic Pulse (EMP) devices, and the impact of these if they were either in close proximity to control systems or from off-site.

- 4.21 MF explained that as part of the justification process, ONR needs to consider all hazards including EMP and the need for components important to safety to withstand them. He confirmed that control measures were in place to prevent devices going onto site with an EMP capability.
- 4.22 Neil Crumpton commented that there is a science park on Anglesey which is connected to the University (Bangor) and involved in nuclear research. He advised that research into 5G technology is also undertaken at the site and that may include dealing with Huawei. He noted the potential security concerns of people mixing who were involved in these different research areas.
- 4.23 PF advised that the world is interconnected and that people meet at conferences, workshops etc. He confirmed that ONR encourages dutyholders to train and educate staff about the dangers of talking about their work, particularly those who have a higher level security clearance. PF advised that people are encouraged to report suspicious approaches which are then fed to the relevant authorities.
- 4.24 MF added that people needed to be mindful of the type of information and whether it is classified or not.
- 4.25 PBurt asked if ONR has a position on disinformation campaigns aimed at nuclear installations, e.g. if a malicious actor attempts to spread disinformation about a nuclear accident.
- 4.26 PF noted this was an interesting question. He advised that this would be a matter predominantly for government as ONR's role is to regulate safety and security, and to advise government. PF suggested that a disinformation campaign about a particular incident would be matter for government to handle as it is not ONR responsibility to regulate reputation.
- 4.27 PB noted at a previous meeting held in London (11 October 2018) PF mentioned the concern about physical 'attacks' on licensed sites. PB advised that he was interested to know if there had been an increase in cyber threats over physical threats.
- 4.28 PF advised that it was recognised that the number of cyber-attacks was increasing overall and this was not specific to the nuclear industry. He confirmed that he was pleased that dutyholders were delivering greater focus on cyber security, adding he was confident that dutyholders were going in the right direction.

## **5 SUMMARY AND CLOSE**

- 5.1 AK commented that she was pleased DL had joined the meeting, and emphasised that while we wouldn't always agree, all NGO representatives were welcome to join meetings. MF added that he would like to reassure NGOs that DL remained very much part of his IAP and that he provided good contributions, along with Peter Burt.
- 5.2 PW commented that he recognised DL could be insistent, but that DL was there to ask difficult questions and hoped DL would be respected by ONR.

5.3 AK advised that ONR would always be respectful to its stakeholders, and the desire was for mutual respect and dialogue. AK and JS thanked NGO representatives who had taken the time to join the video conference, and the ONR staff who had presented. AK and JS wished everybody well.