Non-Technical Summary of Determination

Changes to the permit to reflect updates to flaring management on Site following a detailed technical review. This will have the effect of cutting air and CO_2 emissions, with minimal noticeable offsite impact.

Additionally, taking the opportunity to correct some minor errors in the permit.

Flaring from the FNGL site does not take place continuously and is primarily only necessary to safely turn large pieces of equipment on and off. The elevated flare system is also a critical safety system to allow the plant to shutdown rapidly in an emergency. The Site has elevated and ground flares available to it, but historically (until mid-2023) primarily used only the elevated system for the flaring required for the safe maintenance of the plant. This was due to the neighbouring ExxonMobil plant, utilising the ground flares for day to day operations until that point.

The FNGL ground flares were built in the 1980s and despite ongoing maintenance now require upgrading to modern control standards, or replacement. Shell initially pursued the option of a new Enclosed Ground Flare (EGF) and this was included as a requirement in their PPC Permit by SEPA.

The EGF route has been revisited in the light of escalating construction costs and design issues on other Sites with similar equipment. The Site has also been proactively managing their flaring to reduce the amount flared.

In late 2024 the Site switched to single ground flare operation to cut the amount of fuel gas used. This has resulted in a $C0_2$ saving of 4,700 tonnes per year. A full Best Available Technique (BAT) assessment was then carried out to assess the best route for flaring management at the Site. This concluded that a mode of flaring described as "*Ground Flare Maintenance Flaring Only Mode*" would provide the maximum benefits from using the ground flares to prevent community disturbance, while also minimising the $C0_2$ emissions from this activity (a further reduction of 5150 tonnes of $C0_2$ per year). Under this mode the ground flares are usually deactivated (consuming no pilot gas fuel) and can be activated quickly by the Site if required. A decision making tool has been developed, which assesses the benefits of activating one or two ground flares to deal with an unexpected occurrence on the Site. This factors in the amount of gas to be flared and the duration of the outage, with regular reviews of this decision. It is expected that this will result in three days of ground flare use per year. For planned maintenance activities it is expected that the ground flare(s) will be used for four days per year.

SEPA intends to accept the proposed changes, with additional Conditions in the Permit to require upgrades to the control and ignition systems of the ground flares by end 2027. A new requirement for annual reviews of site wide flaring minimisation work and the inspection, maintenance and training on the ground flares, will also be introduced.