

Response to Department of Defence submission

Exhaust Plumes

The submission notes that

“The proximity of the stack of the waste-to-energy facility to the approach paths of Haulbowline Naval Base and Spike Island is a matter of concern. This is due to the fact that this stack will be emitting significant amounts of exhaust gases and is seen as a potential hazard as it may render approaches by Air Corps helicopters into Haulbowline and Spike Island as unsafe”.

The submission notes that *“The FAA Report¹ further recommends that overflight of an exhaust plume less than 1000 feet is to be avoided and recommends FAA permanent flight restrictions for overflying such plants”.*

The submission notes that *“given the location of the site to the South and West of Haulbowline and Spike Island and the prevailing winds, if the proposed resource recovery centre is developed the Air Corps may be forced to impose a local no-fly restriction around the site with an additional restriction on operations to Haulbowline Naval base and Spike Island which would result in no possible operations to the Naval Base during Southerly Wind conditions”.*

Response

There are a number of existing industrial facilities in the Cork Lower Harbour where exhaust plumes are emitted from stacks. Please refer to **Drawing 001** attached. An aircraft (including helicopters) avoidance buffer of 1000ft has been applied to all of these stacks as a worst case scenario on the basis of the Department of Defence submission.

The Irish Aviation Authority (IAA) recommend that all structures are avoided by aircraft (including helicopters) by 150 metres². There are a number of existing tall/high structures in Cork Lower Harbour including wind turbines, industrial facility structures, church spires, water towers, pylons etc. It is assumed that all of these structures are avoided by aircraft (including helicopters) by 150 metres (500ft). Please refer to **Drawing 001** attached which shows the location of some of these tall/high structures and a 500ft buffer to be avoided by aircraft (including helicopters).

It is noted that the stacks at GlaxoSmithKline (GSK) and Hovione, the DePuy wind turbine and a number of 110kV ESB pylons are located to the south of the Indaver site. It is assumed that all of these structures are avoided by aircraft (including helicopters) by at least 500ft as per the IAA recommendation.

NMCI and Beaufort (3-4 storey buildings) are located to the north of the Indaver site in addition to a 110kV pylon located on Rocky Island. There are many tall structures located to

¹ US FAA Safety Risk Analysis of Aircraft Over flight of Industrial Exhaust Plumes Report 2006

² The 150m (500ft) exclusion is derived from the Irish Aviation Authority (Rules of the Air) Order 2004 (SI 72/2004). The Order states that the minimum heights that can be flown include: “.....closer than 150metres (500ft) to any person, vehicle, vessel or structure.....at a height of less than 150 metres (500ft) above the ground or water”.

the west of Ringaskiddy and to the north and west of Haulbowline Island. It is assumed that all of these structures are avoided by aircraft (including helicopters) by at least 500ft as per the IAA recommendation.

The proposed Indaver stack will be located approximately 1km (3280 feet) from southern side of Haulbowline Island and approximately 1km (3280 feet) from the western side of Spike Island. Please refer to **Drawing 002** which shows the location of the Indaver stack (including 1000ft buffer as a worst case scenario on the basis of the Department of Defence submission). The proposed Indaver process building (including stack) is also shown with a 500ft buffer (as per IAA recommendation).

Allowing for the 1000ft avoidance area (as a worst case scenario based on the Department of Defence submission) from the stack buffer, there is still a distance of approximately 2280ft (695m) between the 1000ft avoidance area and Haulbowline and Spike Islands.

Please also refer to the assessment attached carried out by Dr Edward Porter (AWN). The conclusions of this assessment are that the exhaust plume from the Indaver stack will be in compliance with the recommended levels for turbulence, temperature and oxygen content within 100m of the stack top and thus is within the 500 feet (150m) radius which is required in order to comply with the physical structure exclusion zone. Thus it is considered that a 1000ft avoidance zone is unnecessary.

As noted above, there are a number of existing constraints for aircraft surrounding Haulbowline and Spike Island including the wind turbines and pylons. Even applying a worst case scenario of an avoidance zone of 1000ft around the Indaver stack, it is considered that the proposed development will not add materially to those existing constraints for aircraft. Refer also to the report provided by Wind Farm Aviation Consultants (WFAC) which concurs with this conclusion.

Lighting Requirements

The Department of Defence has requested that if permission is granted, the development should be fitted with obstruction lighting in accordance with ICAO documents and has provided specific requirements for obstruction lighting.

Response

Obstruction lighting will be installed as per Department of Defence requirements.

Access

Concern was expressed in relation to road access to Haulbowline Island in the event of an accident at the facility necessitating local area evacuation.

Response

As stated in the HAZID report, the proposed development will not be a SEVESO establishment. The risk assessment shows that there are no scenarios for which the evacuation of Haulbowline would be required.