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Dear Ralph

Ref: Rivenhall IWMF - proposed increase in stack height

In relation to Gent Fairhead & Co Limited's (GFC) planning application regarding an increase of 23 metres in the height of the stack at the Rivenhall IWMF, we understand that Essex County Council has requested clarification on the following points:

- (1) That the stack would still be structurally stable at the increased height of 58 metres above surrounding ground level (78 metres actual height from base of stack, 108 metres above ordnance datum (AOD)).
- (2) What, if any, changes would be required in its structure/construction at its base to accommodate the increased height.
- (3) Whether the mirror finish of the stack's external cladding could still be maintained.

Fichtner has received clarification on these points from the main contractor for the CHP Plant, Hitachi Zosen Inova AG (HZI) who has discussed the points with its stack supplier. We are pleased to confirm our responses as follows:

- (1) The stack would still be structurally stable. It will be designed and constructed in accordance with relevant British and European standards by a specialist designer and supplier of stacks.
- (2) Apart from the increase in height, the general arrangement of the stack would be the same although the following design changes are required to accommodate the increased weight of the stack and increased wind loading:
 - a) subject to final design calculations during detailed design, an increase in the thickness of the steel plate forming the structural shell (windshield). This would result in a small decrease in the internal diameter of the windshield. The outer diameter of the windshield would remain unchanged at 7 metres.
 - b) an increase in the size of the foundations and the strength and/or number of the holding-down bolts between the windshield and the foundations.



Notwithstanding the above, drawings showing elevations, sections, plan views and general construction details have been prepared by Arctica on HZI's behalf to support the proposed variation in stack height. In addition, the cladding manufacturer (3A Composites GmbH) has provided GFC with samples of the proposed reflective cladding and information on the effects of weathering on HZI's behalf.

- (3) The mirror finish can still be maintained via mobile crane with telescopic boom, as previously submitted to the planning authority in relation to planning condition 14.

We trust the above responses provide the clarifications required.

Yours sincerely
FICHTNER Consulting Engineers Limited

Nick Claridge
Principal Engineer

Phin Eddy
Director

