

15 February 2022

610.30264.00200-L02-v2.1-20220215.docx

Multiplex Constructions Pty Ltd  
135 King St  
Sydney NSW 2000

**Attention: Anthony Toomeh**

Dear Anthony

## **New Sydney Fish Market Modification 7 - Sediment Capping Air Quality**

Multiplex Constructions Pty Ltd (Multiplex) are currently undertaking construction activities for the new Sydney Fish Market in Blackwattle Bay, Sydney. As part of the ongoing refinement of the construction methodology of the new Sydney Fish Market, Multiplex are proposing to conduct in-situ capping of the sediments following redistribution works (Mod4).

In order to ensure appropriate air quality mitigation measures are identified and implemented. It is appropriate to review the potential emissions from the sediment capping activity as well as mitigation measures adopted by the existing Construction Air Quality and Dust Management Plan. This letter has been prepared by SLR Consulting Pty Ltd (SLR) at the request of Multiplex, to detail the review of potential impacts and required mitigation measures.

### **1 Background**

SLR was commissioned by UrbanGrowth NSW Development Corporation (UrbanGrowth NSW) to perform Air Quality Impact Assessments (AQIA) for Stage 1 and Stage 2 of the proposed development (SLR reference, 610.17553-R02-v4.0 and 610.17553-R03-v3.0 respectively). SLR also prepared a *Construction Air Quality and Dust Management Plan – SSD 8925* for the works (SLR reference, 610.30264-R01-v0.1.docx, February 2021), commissioned by Multiplex.

The main potential sources of air emissions associated with the construction works were identified as:

- Dust impacts during the demolition works;
- Dust impacts due to loading and unloading of materials;
- Wheel-generated dust from trucks travelling along unpaved roads;
- Wind erosion of exposed surfaces and stockpiles; and
- Odour impacts due to the decomposition of marine growth on the underwater structures should they be stored on-site for an extended period.

The potential for off-site dust impacts was assessed using a qualitative risk-based approach prescribed by the Institute of Air Quality Management (IAQM). The results of this assessment indicated that dust impacts due to the construction activities could be adequately managed with the implementation of site-specific mitigation measures, and that the risk of residual impacts was *low* for demolition, earthworks and construction activities and *negligible* for track-out.

## 2 Main Works SSSA Modification 7

Multiplex are proposing to place a 1.6 m thick layer of sand and crushed stone over approximately 18,000 m<sup>2</sup> of redistributed sediments inside the cofferdam prior to commencing building construction works within this area in order to:

- Further mitigate potential environmental impacts from sediments following redistribution during temporary construction dewatering of the cofferdam – this will be via physical separation to reduce the potential for mobilisation of suspended solids and exposure of sediments to atmosphere during construction works.
- Provide a safe working surface for construction.

The cap will remain in place underlying the constructed building.

The bottom 1.0 m to 1.2 m of the cap will be sand, which is proposed to be brought onto site on barges and placed onto the seabed prior to dewatering of the cofferdam. The top 0.4 m to 0.6 m layer is proposed to be crushed stone, which will be brought onto site via road and placed onto the dewatered area within the cofferdam using excavators.

## 3 Mitigation Measures Currently in Place

The mitigation measures listed in Section 8 of the *Construction Air Quality and Dust Management Plan* to minimise the potential for off-site dust and nuisance odour impacts associated with transport and handling of potentially dusty material are as follows:

- *Where excessive dust events occur (i.e. prolonged visual dust in a particular area), additional watering of dust producing activities will be undertaken or activities temporarily halted until such times that the dust source is under control.*
- *All materials shall be stored or stockpiled at suitable locations and stockpiles shall be maintained at manageable sizes which allow them to be covered, if necessary, to control emissions of dust and or VOCs/odour*
- *The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs*
- *Stockpiles that will be in place for more than 20 days and are not actively used as well as any stockpiles that are susceptible to wind or water erosion will be suitably protected from erosion within 10 days of the establishment of each stockpile.*
- *All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material*
- *All on-road vehicles will comply with relevant vehicle emission standards (prescribed by the NSW RMS), where applicable, and will be maintained in good condition, in accordance with manufacturer's specifications and POEO Act.*

- *Delivery trucks will switch off engines whilst undertaking a delivery on-site, if idling time is likely to exceed 5 minutes.*
- *Truck queuing and unnecessary trips will be minimised through logistical planning and by the identification and use of specific park up/hold areas away from the Project.*
- *Adequate water supply will be available on the site for effective dust/particulate matter suppression/mitigation using a combination of potable and non-potable water sources.*
- *Works will be assessed during strong winds or in weather conditions where high levels of airborne particulates may potentially impact the sensitive receivers.*
- *All trucks entering or leaving the Site will have their loads covered.*
- *If unanticipated strong odours or significant visual dust emissions are noted or observed on site, an investigation will be undertaken by the Project Manager to identify the scope of work or source of the emission prior to undertaking and applying any additional mitigation measures.*
- *Sand and other aggregates will not be allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.*

#### 4 Implications of Modification 7 for Air Quality Impacts

The proposed sediment capping is in line with the *Construction Air Quality and Dust Management Plan* measure to keep seabed material covered to limit odour emissions. In addition, the sand layer will be wet when first exposed after dewatering and the crushed stone would have a relatively low potential for dust generation after placement.

Sediment capping was not specifically identified as an activity in the AQIA reports and the assessment assumed a 'Medium' dust emission magnitude for earthwork activities, which is applicable to sites with a total of between 20,000 t to 100,000 t of material moved. However, as the sensitivity of the general area was classified 'medium' for dust soiling and 'medium' for health effects by the AQIA, a 'Large' dust emission magnitude for earthwork activities (which is applicable to sites with a total greater than 100,000 t of material moved), would not change the level of air quality risk due to earthwork activities nor the recommended mitigations measures based on the IAQM methodology. In accordance with the *Construction Air Quality and Dust Management Plan* water sprays should be used to suppress dust during placement of the crushed stone layer, should it be required.

Based on the above, no changes to the conclusions of the Air Quality Impact assessment, or to the mitigation measures included in the *Construction Air Quality and Dust Management Plan* are identified as being required as a result of proposed SSDA Modification 7. The additional activities associated with the sediment capping are not expected to lead to a significant change in air quality impacts for the Project.

Yours sincerely



ALI NAGHIZADEH  
Principal - Air Quality

Checked/  
Authorised by: KL