

11 February 2019

Ms Aditi Coomar
Principal Planner
Department of Planning and Environment
320 Pitt Street
SYDNEY NSW 2000

Dear Aditi,

Supplementary Response to Submissions- Tweed Valley Hospital SSD 9575

Following the Response to Submissions lodged with Department of Planning and Environment (DPE) late last Month, we have additional information now available in response to your request for additional information.

Australian Noise Exposure Forecasts (ANEF)

Attached is a letter from aviation experts Avipro, which identifies the ANEF Contours based on the Gold Coast Airport (GCA) and concludes that the proposed Hospital Site is outside the year 2015 and year 2047 ANEF 20 Contours. In other words, any jet aircraft noise levels associated with approach or departure to GCA are below the ANEF 20 measurement level.

Peer Review of Ecology Issues

Following completion of the exhibition of the EIS and attached specialist reports, issues were raised about ecology impacts of the proposal. The updated Biodiversity Development Assessment Report (BDAR) under the *Biodiversity Conservation Act 2016* and Matters of National Environmental Significance Assessment (MNES) under the *Environmental Protection and Biodiversity Conservation Act 1999* (Cwth) were submitted with the response to submissions report. In addition to these documents, a Peer Review was commissioned which included visits to site of relevant experts on selected species.

The Peer Review is attached and supports for the conclusions reached by the above environmental assessments previously submitted.

Air quality

The issue of air quality during the Stage 1 works is addressed below.

Particulate matter would be the main source of air pollution during Stage 1 construction works. Emissions to the atmosphere during construction typically relate to dust and particulates originating from vegetation clearing, general earthworks and crushing of materials and gaseous emissions from vehicles and plant.

The construction of Stage 1 has potential to impact a number of surrounding sensitive receivers and natural environments, including residential areas, educational sites and environmental areas among others.

Dust emissions are affected by number of factors including wind direction, wind speed, soil type, soil moisture, rainfall or heavy dew and extent of vegetation cover. In order to manage these impacts HI proposes mitigation measures such as the following which would typically be contained within the site Construction Environmental Management Plan (CEMP):

1. All activities on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, the contractor shall identify and implement all feasible and reasonable dust mitigation measures, including cessation of relevant works if no alternative available.
2. Prior to construction activities, training will be provided to all project personnel, including relevant sub-contractors on sound air quality control practices and the requirements of the relevant Air Quality / Dust Management Plan (to be prepared by the contractor prior to commencement) through inductions, toolboxes and targeted training.
3. An Air Quality and Dust Management Plan as a sub-plan of the Construction CEMP will be prepared by the contractor. The objective of the Management Plan would be to ensure that impacts on air quality are minimised. To achieve this objective, the following would be addressed:
 - Ensure appropriate controls and procedures are implemented during construction activities to avoid or minimise air quality impacts and potential adverse impacts to nearby sensitive receivers
 - Ensure appropriate measures are implemented to address the mitigation measures detailed in the EIS and applicable conditions of approval
 - Ensure appropriate measures are implemented to comply with relevant legislation and guidelines. Guidelines and standards relevant to air quality and also the development of an associated management plan include the following publications:
 - National Environment Protection Council's (NEPC) – NEPM for Ambient Air Quality Guidelines
 - *Protection of the Environment Operations (Clean Air) Regulation, 2002*
 - AS 2922 Ambient Air Guide for Citing of Sampling Equipment
 - AS 3580.1.1-2007 Methods for Sampling and Analysis of Ambient Air – Guide to Siting Air Quality Monitoring Equipment

- AS 3580.10.1-2003 Methods of Sampling Analysis of Ambient Air
- Action for Air 2009 (NSW DEC)
- Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales (DEC 2005)
- Air Quality Monitoring Criteria for Deposited Dust (DEC Guideline).

Additional measures to reduce air and water impacts could include:

- Construction activities will be modified, reduced or controlled during high or unfavourable wind conditions if they have a potential to increase dust generation
- Control measures including water carts, sprinklers, sprays, dust screens or the application of geo-binding agents will be utilised where applicable to control dust emissions. The frequency of use will be modified to accommodate prevailing conditions. Dust control equipment will be maintained to ensure its operability
- Erosion control structures will be checked regularly for build-up of silt and other materials to ensure deposits do not become a dust source
- Waste will be segregated and collected on a regular basis
- No waste will be burnt on-site
- Stormwater, recycled water or other water sources shall be used, where feasible and reasonable, in preference to potable water for construction activities, including concrete mixing and dust control.
- Watercarts/water trucks will be in permanent use on-site during excavation and civil works.
- Temporary stockpiles that are not required for imminent use will be stabilised with spray grass or appropriate fabric.
- Continuous monitoring of weather forecast to stop dust generating activities in case that high winds are expected.
- Before extended breaks (e.g. Easter, Christmas), areas will be treated with spray grass.
- Only those areas where immediate structures are to be built or works required will be stripped. Areas will be stripped at the latest possible date to comply with the program.
- Construction haul roads and temporary carparking will maximise the use of permanent infrastructure. These roads/carparks will have a sacrificial seal to minimise dust generation.
- Areas of disturbed material and access roads will be stabilised where possible using appropriate methods
- Measures implemented to minimise dust, soil or mud from being deposited from vehicles on public roads. This will be achieved through rumble grids and large aggregate at entry/ exit points.
- Manual cleaning will also be carried out where appropriate. In the event of any spillage or tracking, the spilt material will be removed within 24 hours
- Hardstand areas and surrounding public roads will be cleaned as required.

Rock Crushing and Stockpiles

As outlined in the Response to Submissions, since lodgement of the EIS additional geotechnical investigations have been carried out on-site to better understand the geological profile of the site. In summary, the investigations confirmed that the site profile is highly varied with intermittent bands of shale rock varying significantly depending on the relative location, from very weathered rock to fresh high strength rock. This, in addition to finalising the subgrade levels (RL's) make it difficult to predict the quantity of rock to be crushed. However, it is likely to be much less than was originally assumed. The quantity of rock being crushed, if any, will be determined during excavation.

While the type and size of rock crushers are yet to be determined the management plan for the site would typically include:

- Rock crushers will have a water attachment for dust suppression at the source. The water is sprayed at the face of the crusher before, during and after the crushing.
- Crushers will be located as far as practicable from Cudgen Road and immediate neighbours (i.e., on the north-west area of the site).
- All crushed rock suitable for re-use will be recycled on-site as fill, sediment control, pavements, hardstands, construction exits and pipe bedding materials.
- Where possible, the oversize material from hard rock projects is also reused or vehicle entry shake downs and erosion control.
- Excavated surplus material will be temporarily stockpiled within the landscaped areas with appropriate dust, soil and water management controls. These controls will be further determined with the contractor (as they are dependent on proposed building methodology and staging) and comprehensively documented in the CEMP for the Project along the following principles:
 - *Construction Traffic*
 - The contractor will implement a truck movement assessment and devise a methodology that reduces the intensity and timing of the fill deliveries/movements. This will include an assessment of peak traffic times and options to spread out the number of truck movements over longer durations.
 - *Reduce volume of stockpiling*
 - One approach to mitigate negative effects of stockpiling is to reduce the volume of stockpiling required in the first instance. An “only as required” approach to stockpiling will be implemented which will reduce the volume of stockpiling on site at any given time.
 - Stockpiles would be located in accordance with a Stockpile Management Protocol.
 - *Dust management*
 - Appropriate dust control measures will be implemented for example wetting down with recycled water and any times stockpiles that are

- uncovered. Whenever practical, height of stockpile mounds to be reduced to mitigate impact of wind and run off water.
- Stormwater runoff management
 - Dependant on the duration of stockpile, the contractor would apply a combination hydro-mulch and or geo textile wrap over any fill being stockpiled. These measures will also assist in stabilising the outlet layer of the stockpile and will control the creation of dust.
 - Stockpile locations will have temporary run off water channels connected to the site temporary stormwater system which is connected to sediment basins.
 - Truck movements and pedestrian safety
 - Appropriate separation, access routes, pedestrian protection (i.e. water barriers and crossing points) will be implemented into the site traffic management plan to ensure safe pedestrian movements are maintained during stockpiling and material redistribution.

Detailed monitoring and inspections will be undertaken during construction to ensure impacts are mitigated.

Vegetation Buffer

Health Infrastructure's response to concerns raised about ecological buffers is provided in Section 3.20.3 of the RtS and in our response to Council's comments (Refer aa of Table 4-2 of the RtS). It is reproduced below for convenience and clarity.

The main purpose of an ecological buffer to the coastal wetland areas is to mitigate any impacts of development on water quality. There are numerous guidelines and recommended distances for buffers issued by various government agencies depending on the type of project. The determination and establishment of buffers from ecologically sensitive lands needs to be considered on a case by case basis with regard to relevant guidelines. As the Tweed Valley Hospital (TVH) Project is classified as SSD it automatically requires the preparation of a BDAR which is assessed and determined by the Office of Environment and Heritage (OEH). The BDAR (provided at Appendix E of the RtS) is required to assess the biodiversity impacts of the project including the need for the inclusion of a range of measures to avoid and minimise the impact of development on biodiversity. In cases where impacts cannot be avoided or minimised, mitigation measures including but not limited to ecological buffers are identified.

The location of the TVH building envelope has been selected to avoid and minimise the clearing of habitat areas of threatened species, including those that facilitate the movement that maintains their life cycle. The proposed building envelope is setback just over 70m from the mapped Coastal Wetland to the north of the site. Within this setback is a mixture of rehabilitated vegetated land, APZ's, managed lands (including stormwater treatment and detention basins, sheet flow over mown grass and part of the ring road). It is noted that managed land (including the basins) is not normally considered part of an ecological buffer, which generally comprises native

vegetation, however, all of the above measures contribute to mitigating impacts of stormwater entering the wetland.

The BDAR for the project undertook a comprehensive assessment of the proposal including indirect impacts on adjoining ecologically sensitive areas. The BDAR concluded that while the proposed concept plan as proposed (including the proposed setback arrangement mentioned above) could result in some prescribed impacts on water quality in the Coastal Wetland, the identified mitigation measures, including adaptive management strategies, will reduce the likelihood and consequence of any residual impacts to levels that do not require any biodiversity offsets. The project as proposed, including the proposed setback arrangement, is therefore justified and appropriate with regard to biodiversity impacts in general and in particular in relation to water quality in the Coastal Wetland.

In addition the following comments are provided to justify the proposed ecological buffers and the location of the stormwater basins.

- The previous land use as a working farm had no stormwater management system in place and directed untreated and sediment-laden stormwater from the ploughed fields on the site to discharge directly into the wetland area.
- The current siting of the sedimentation basins allows for capture of sediment-laden run off from the existing disturbed areas of the site resulting from the previous land-use as a working farm that will continue to be present during construction and operations.
- Due to the topography of the site, the sediment basins need to be located at the bottom of the hill adjacent to the wetland. If a 50 m buffer to the wetlands were in place, this would place the sediment basins near the top of the slope, and would result in significant additional previously disturbed areas of the site continuing to discharge sediment-laden run off directly into the wetland.
- Hydro-mulching of the former ploughed fields with a native grass seed mix is proposed to take place pre-construction. This will suppress the growth of weeds and minimise erosion potential of the north-facing slope and subsequent sedimentation impact on the wetland. The hydro-mulching and other landscaping measures such as the planting of grassed areas further up the north-facing slope will further minimise potential run off being deposited in the wetland area once construction has been completed.

Health Infrastructure also commits to ensuring that, prior to operation of the hospital, the basin areas are planted out and landscaped using native grasses and plant species to ensure the basin areas are maintained in a natural state as much as possible. This will be further developed as part of the Stage 2 SSD Application.

Remediation

Following submission of the RtS a Site Audit Report and Site Audit Statement (SAS) (Part B5) which confirms that the site can be made suitable for a hospital if remediated and managed in accordance with the *Remediation Action Plan Tweed Valley Hospital Site, 771 Cudgen Road Cudgen NSW* prepared by OCTIEF Pty Ltd and dated 1 February 2019 and the addenda to that RAP as outlined in the SAS on page 11.

Updated Plans

Subsequent to the upload of the Response to Submissions it became apparent that a number of the plans were incorrectly titled. To rectify this, a replacement Appendix B and G is attached with correct titles and numbers. These two appendices in the RtS should be wholly replaced with the ones enclosed.

Health Infrastructure trusts this information clarifies your issues and allows for an efficient assessment of this important project. If you have any questions, please contact Leoné McEntee on leone.mcentee@health.nsw.gov.au

Yours sincerely



Rebecca Wark
Executive Director Rural and Regional