COLLIS PRIMARY SCHOOL,
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LONDON BOROUGH OF RICHMOND UPON THAMES

AIR QUALITY ASSESSMENT

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Department for Education

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1.0 AIR QUALITY ASSESSMENT

1.1. This Air Quality Assessment has been prepared by Nicholas Taylor + Associates on behalf Spatial Initiative Ltd ('the Applicant') in support of a planning application for the redevelopment of Collis Primary School in Teddington ('the Site') within the London Borough of Richmond Upon Thames ('LBRuT').

1.2. The site is triangular in shape and currently contains Collis Primary School, a mixed gender three form of entry (3FE) community primary school located on a backland site in the residential area of Teddington. The school currently operates in several teaching blocks within the site.

AERIAL VIEW OF COLLIS PRIMARY SCHOOL

1.3. The original main school building has been assessed by the Dept for Education, where it was found that the facilities did not meet the criteria for modern teaching facilities. Accordingly, planning permission is sought for the construction of a part one, part two storey teaching block and the demolition of the existing failing teaching block. Pupil and staff numbers will not change as a result of this development.

PROPOSED DEVELOPMENT

1.4. Full details and scope of the planning application is described in the submitted Planning Statement, prepared by Nichola Taylor + Associates.

1.5. The development has the potential to affect local air quality during its construction and operation.

AIR QUALITY - CONSTRUCTION PHASE

1.6. During the construction phase dust and emissions generated by construction activities and the operation of construction plant have the potential to impact upon dust-sensitive receptors and human health. The following activities have the potential to cause emissions of dust.

- Site preparation including delivery of construction material, erection of fences and barriers;
- Demolition of existing buildings on site;
- Earthworks including digging foundations and landscaping;
- Materials handling such as storage of material in stockpiles and spillage;
- Construction and fabrication of units; and
- Disposal of waste materials off-site.

1.7. There is a risk of dust causing a nuisance to the school and neighbouring uses while works are ongoing. A detailed Construction Management Plan accompanies this submission, where particular emphasis is paid to controlling dust emissions. The control of dust is a prime concern for all construction projects, particularly during periods of dry and windy weather.

1.8. Below is a summary of the proposed mitigation to minimise dust during construction using the guidance provided in Section 12 of the Code of Construction Practice and with reference to GLA's Supplementary Planning Guidance – The Control of Dust and Emissions during Construction and Demolition and 'Dust and Air Mitigation Measures' guidance provided by the Institute for Air Quality Management.

- Dust emissions will be monitored visually throughout working hours.
- During construction works the primary air pollution emissions relate to dust generated when building materials are broken up and fumes generated by machinery.
- All spoil and waste materials stored temporarily within skips will be covered at all times.
- Dust generating activities will be minimised and carried out a safe distance from adjoining properties and site boundaries.
- Power tools used in dust-generating activities will be fitted with vacuum bags to minimise dust.
- Machinery exhaust emissions will be kept as low as is practicable by using well maintained vehicles and machinery at all times.
- All on-road vehicles travelling to and from the Site will comply with the requirements of the London Low Emission Zone.
- The use of compressors, generators and portable petrol cut off saws can also have impacts in terms of air pollution and emissions.
- Any compressor and generator tools used will be of the latest design available with low emission ratings.
- All machinery will be switched off when not in use to minimise both noise and emission generation.
- Portable petrol cut off saws will be operated with an automatic water applicator. The water application is designed to dampen any arising debris and dust as well as reduce wear to the blade.
- When leaving the site with waste, vehicles will be covered to prevent soil blowing away, and vehicles arriving with materials will be well secured for additional to comply with Health and Safety on Site.
- Wheel washing facilities and sprinklers to dampen dust will be provided on Site to minimise the spreading of dust on the surrounding streets.
- The Site Manager will undertake daily inspections of the Site and the roads surrounding the site to ensure that dust control measures are complied with. The Site Manager will record and respond to all complaints regarding dust and air quality pollutant emissions and will maintain a log of such complaints and any action taken to resolve them. The frequency of inspections will increase when activities with a high potential to produce dust are being carried out, as well as during periods of prolonged dry or windy conditions.

1.9. The above precautions will ensure that air quality will not be unduly harmed as a result of the development. What is more, as this school will be erected using modular construction methods, much of the disruption caused during construction will occur off-site (outside of the borough).

AIR QUAITY - OPERATIONAL DEVELOPMENT

1.10. Operational phase impacts on air quality may arise due to vehicle emissions generated by road traffic associated with the proposed development. However, it should be noted that the current lawful site use would itself generate traffic, being an operational school.

1.11. With no increase in pupils or staff resulting from this development, there will be a neutral impact in terms of air quality when considering site activity.

1.12. Dept for Education schools have a requirement to install low NOx boilers with maximum NOx emissions of 40mg/kWh, which will be a substantial improvement compared to the existing situation in the building to be demolished. The proposed development involves stripping out 2No 14Year old REMEHA P320/7 boilers, that are circa 85% efficient and have unknown NOx (assumed to be significantly higher that the new proposed installation.)

1.13. Whilst the final boiler design has not been specified yet, the standard condenser boiler installed on PSBP Schools would be a Stratton mk2 wall hung boiler which has 95-96% efficiency with NOx around 35-36mg/kWh.

1.14. Additionally, the proposed new teaching block is required to maximise air tightness to minimise the impacts of uncontrolled infiltration and control the air entering and leaving the building. This will have a reduced demand on the boilers to be installed, thus improving the air quality in the area.

1.15. Finally, the school have a Gold Travel Plan which has a target of reducing vehicle trips to the school (by pupils and staff) during a typical school day. This will have an improvement on air quality. No other specific mitigations measures are deemed necessary.

1.16. There will be no increase in activity from this development, and with low NOx boilers and implementation of the School Travel Plan, there will be a net improvement to air quality in the medium to long term.

1.17. Overall, it is concluded that there are no air quality constraints to the proposed development.