**Q01 Portsmouth City Council**
**Delivering Air Quality Benefits: How does the project deliver improvements in air quality?**

Portsmouth City Council (PCC) is a local authority in England with five Air Quality Management Areas (AQMAs) which were declared in 2005. PCC's 2016 Air Quality Annual Status Report indicated that during 2016, six locations exceeded the National Air Quality Objective levels in the city. Defra forecast exceedances until 2020 (UK plan for tackling roadside nitrogen dioxide concentrations, Defra/DfT, July 2017).

The programme will focus on reducing traffic generated air pollution emissions in Portsmouth, through a mixture of behaviour change and marketing activity targeted specifically at AQMAs as well as citywide. Specific elements to target residents, schools and workplaces have been devised, as well as an infrastructure element to encourage use of active travel modes. The schemes specifically targeting the AQMA's support the objectives proposed in the recently developed Air Quality Strategy. The objective of the programme will be to support and promote a modal shift in transport from car to sustainable travel, and uptake of electric vehicles which in turn will help address known air quality issues.

A programmatic approach will be adopted, with individual initiatives or schemes grouped into the following five programme elements which are split into individual projects detailed in appendix 2:

**Communications and Marketing -** A package of effective communications and marketing measures, which could include an anti-idling campaign, participation in National Clean Air Day, recruitment of Clean Air Champions, formation of a Clean Air Network, events to promote air quality awareness, and the introduction of branding to promote good air quality. Such measures can have a major impact on encouraging people to change their behaviour, and this funding would enable PCC to engage with local people on ways that they could travel more sustainably, contributing to reduced local levels of $NO_2$. An ***anti-idling campaign*** for example would feed into improving air quality. The 2001 Census states that there were 72,609 cars and vans in Portsmouth. Every 10 minutes of vehicle idling costs at least one-tenth of a litre in wasted fuel and each litre of fuel generates 2.4 kg of CO2. If every vehicle in Portsmouth idled for ten minutes a week this would result in almost 1m kg of CO2 being pumped into the atmosphere unnecessarily. Acknowledging the success of ***Clean Air Day*** 2017 which resulted in 86 million opportunities to see advice and messaging on ways in which people can moderate their behaviour to support improvements in local air, PCC are keen to participate in 2018. ***Clean Air Champions*** and a ***Clean Air Network*** will raise awareness and deliver widespread advice and messaging on ways to support improvements in local air quality.

**Residents -** Personal journey planning - targeted at residents in AQMA's to encourage use of sustainable travel modes and green driving behaviour, electric vehicle promotion, cycle training courses targeting both new and beginner cyclists, and bike maintenance courses, family bike grant scheme offering discounted purchases of bikes and safety equipment, Bike Dr. - Bike maintenance sessions for free basic cycle repairs.

There is opportunity for reduction in car use for short trips, with 16% of all car trips starting and finishing in Portsmouth being less than 3kms in lengths (Portsmouth Western Corridor Model). The Portsmouth Resident Transport User Behaviour 2013 shows that a majority of households in Portsmouth report ownership of at least one bicycle (61%), with 63% of respondents agreeing that cycle journeys of up to 20 minutes would be or are a practical way for them to get around. There is opportunity to increase cycle use for local journeys, and this project would work towards this aim.

PCC has been awarded funding from the Office for Low Emission Vehicles, for on-street residential chargepoints, and are undertaking a two year trial to introduce chargepoints in three of their public car parks. Promoting EV use and the local charge points available, raising the profile of EV use in the

city and enabling people to see the benefits of EVs, and the ease of owning one would support reductions in the amount of $NO_2$ being produced in the city.

**Schools -** Pompey Monsters Walk to School Challenge - Roll out of successful scheme to schools in or adjacent to AQMA areas, School Travel Planning - Working with schools in and around AQMAs to encourage sustainable travel for healthy school journey's, Modal shift to include ModeShift STARS, Pedestrian training would teach primary aged children basic road safety to improve safety and encourage walking to school. Scootability training for schools with primary aged children to encourage polite and safe scooting to school.

The objective of the schools element of this bid is to encourage children at targeted schools to travel to school sustainably to reduce traffic congestion around schools and on routes to schools.  Various proven measures will be adopted through this element, having a positive effect on school travel modes and behaviours.

**Workplaces -** Workplace Travel Planning - targeting large employers and their employees in AQMA areas, or those businesses whose staff travelling through AQMA areas for commuting or business travel. Workplace green fleet/driving - working with businesses in the city with large fleets, to encourage smarter driving behaviour.  Workplace Sustainable Travel Fund - a fund available for businesses to apply for measures to promote sustainable work travel to their employees, prioritising workplaces in and around AQMA's.

The objective of the workplace travel planning element is to support local businesses to encourage staff to travel to work sustainably.   With only three roads linking the island to the mainland (M275, A3 and A2030) there is significant potential for severe congestion at peak times.  Working with local businesses to encourage and support sustainable travel will help to tackle the local congestion.  Four of the five AQMA's are located in the western corridor, comprising the M275, A3 and other key routes serving the western area of Portsmouth - the city's most important transport corridor, carrying just under half of inbound traffic to Portsmouth city centre in the morning peak.

**Infrastructure Improvements**- Improvements to permeability to encourage walking and cycling, making these modes more attractive forms of travel.  To include greening and improvements to public realm where possible.

Timelines for reducing air pollution will be achieved over as short a timescale as possible.  As many of the measures proposed support and encourage behaviour change, this will have an immediate effect on the way many people travel, achieving an immediate reduction in local car use.

There are a number of secondary effects which could arise through the roll out of this programme:
- Reduction of particulate matter - particulate matter derives not only from engine emissions, but also from tyre wear and tear and braking therefore modal shift away from motorised travel will reduce particular matter.
- Improved health of residents - long term exposure to air pollution increases the risk of developing certain diseases, in particular, respiratory conditions such as asthma attacks and pneumonia.  Pre-existing heart and lung conditions can also be worsened by air pollution. Therefore reduced levels of air pollution would improve the health of local residents who are more susceptible to its effects.
- Increased physical activity levels - Promoting active travel will increase physical activity levels amongst residents, with a focus on children through the Travel to School element.  It is recommended that adults should try to be active daily, aiming at achieving 150 minutes of moderate activity every week.  This figure rises to 1 hour of physical activity daily for

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children.  Active travel, for example through walking, cycling and scooting is a key way to build activity into everyday lives.

- Improved vibrancy in local community through increased levels of pedestrians  and cyclists
- Supporting the city's economy and increasing productivity through reduced levels of congestion
- Reducing social isolation through improving permeability for walking and cycling.

Portsmouth has a good evidence base of emission data. The main pollutant of concern in Portsmouth is $NO_2$, and monitored concentrations of this pollutant in recent years have exceeded the annual mean National Air Quality Objective (NAQO) at a number of varying locations throughout the city. The most significant source of air pollution in the city comes from road traffic and PCC currently has five AQMA's declared on the grounds of monitored or modelled exceedances of the UK annual mean $NO_2$ NAQO.

There is limited ongoing evidence base of traffic congestion in AQMAs as there are not traffic counters in these areas. However a 2013 VISSIM model provides an evidence base along with Portsmouth Western Corridor Model and Sub Regional Transport Model. These show that there increases in car ownership and significant housing, employment and retail growth predicted. Between 2013 and 2027 it is estimated that traffic will grow by 16% in the AM peak, and 27% in the PM peak and by 23% in the weekend peak hours. Without intervention, significant congestion is expected in the City Centre and at the approaches to/from the M27 motorway, which would have a significant negative impact on local air quality.

It is vital that air pollution in the city is tackled with robust and sustained actions.  The measures proposed in this bid will help to drive forward improvements to air quality across the city, giving a focus to a range of people and locations.  Priority will be given to AQMA areas.

All of the measures outlined in this programme would play a role in reducing levels of $NO_2$ across the city and in particular those in AQMAs with exceedances.  Through the PCC source apportionment study 2017, predicted figures for annual mean $NO_2$ concentrations at various receptor sites across the city were calculated.  Predicted exceedances of the annual mean $NO_2$ Air Quality Objective in 2020 were recorded in AQMA 6 and 11.  Focus will be given to these particular AQMA's.

Through this project focus will be given specifically to the schools, workplaces and residential areas within or close to where the highest levels of air pollution have been recorded, having a direct impact on air quality levels.  Some of the measures will directly result in modal shift for some local journeys.

Detailed after monitoring will be conducted, which will help to demonstrate the improvements to air quality that have resulted from the project.

Behaviour change measures are intended to encourage long term behaviour change, with results from previous similar initiatives showing good levels of modal shift.  Further work through forthcoming schemes in the city will also provide on-going support to continued modal shift.

The project aims to generate modal shift away from car travel to more sustainable modes and encourage behaviours that are less detrimental to air quality as such delivering on the no harm principle.  There are no plans to re-route motorised traffic as part of this programme. The only effect that this measure would have on air quality would be positive, and would not lead to increases in greenhouse gases.  No schemes or initiatives developed as part of this project would discriminate or produce negative effects on any part of the city.