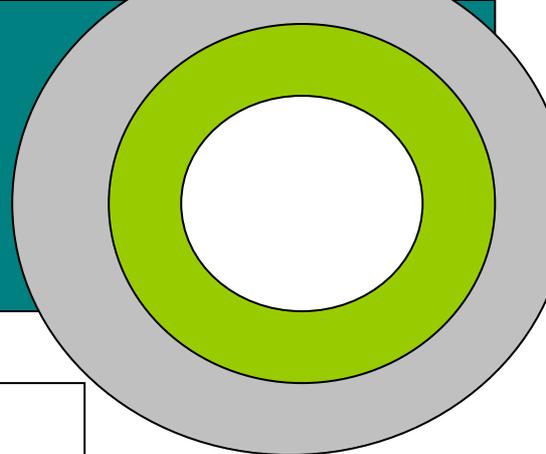


# NATURAL HEALTH IMPROVEMENT ZONE



## NATURAL HEALTH IMPROVEMENT ZONE

Natural Health Improvement Zones will be declared in Birmingham, where areas of the city score below a threshold value for **health**, and the environment, within the Birmingham 20:20 Index.

Natural Health Improvement Zones are a supplement to SP 11 Green Infrastructure Network Policy under Birmingham's Core Strategy 2026. They are endorsed within the Birmingham Health Protection Strategy 2011 and the Air Quality Action Plan 2011.

## SP11. Green Infrastructure Network - Supplement

**Natural Health Improvement Zones (NHIZ)**- will be declared in areas of the city where the Birmingham 20:20 Index scores for both health and environmental factors are considered poor; below a set benchmark. They will represent a partnership delivery mechanism to bring about positive change:-

- All Air Quality Management Areas (AQMA) will automatically qualify as parts of an improvement zone.
- Within the Air Quality Management Areas – the aim will be to increase the tree canopy across the area, utilising all available spaces, both public and private.
- There are many national and international evidence papers that confirm the direct link between improvements to air quality from urban trees – resulting in fewer hospital admissions and deaths relating to respiratory disease.
- The declared Natural Health Improvement Zone may cover a larger geographic area than the AQMA; so that other urgent public health concerns can be properly addressed and targeted through the natural environment.
- Other key public health concerns to be targeted through NHIZ's will be Obesity levels in adults and children, cardio-vascular disease and mental health. There will be other subsidiary benefits such as fewer road traffic casualties and better nutrition.
- 'Quiet Roads' will be nominated for safe walking, cycling, running and safer routes to school – to encourage more active lifestyles.
- Exercise on prescription and signed routes will be created and promoted around neighbourhoods; and children's play and access to sports will be prioritised.
- Priority will be given to creating linkage between sites, target gaps in the network to create new spaces, and look to encourage food growing such as plots and orchards.

## AIR POLLUTION AND PUBLIC HEALTH

Natural Health Improvement Zones will become an active policy of Public Health, to tackle the growing evidential link between traffic emissions and poor health, particularly in relation to air bourn particles (PM10s and PM2.5s) and Nitrogen Oxides, (EU - Ambient Air Quality Directive 2008/50/EC).

The House of Commons Environmental Audit Committee 2010 identified that the largest cost associated with poor air quality is the adverse affect on human health. The societal costs of deaths, as a result of poor air quality in Birmingham, is in the region of £182 million pounds per year.

In a report by Asthma UK, Heart of Birmingham Primary Care Trust 2007- Birmingham was highlighted as having the highest hospital admissions for asthma - anywhere in the UK.

The Joint Strategic Needs Assessment (Birmingham Health & Well Being Partnership 2010) – cited air quality and respiratory disease as one of the city's key research topics – demanding answers must be found.

## EVIDENCE

There is now a recognised body of international evidence that clearly demonstrates the effectiveness of urban trees to 'scrub' the atmosphere and improve air quality; resulting in lowered hospital admissions and respiratory related deaths.

- Birmingham took a lead in this area of national research in 2003 with a joint study lead by Lancaster University, supported by University of Birmingham and the Centre for Ecology & Hydrology, Edinburgh – “Trees and Sustainable Urban Air Quality” – Using Trees to Improve Air Quality in Cities; under the NERC- URGENT Programme.
- It concluded that trees absorbed three times more airborne pollutants than grassland. The research also identified how different tree species performed. It also demonstrated a direct correlation between urban tree density and excessive deaths from respiratory disease.
- A recent study (2009) for east London has measured the effect of trees specifically within the East London Green Grid; and reached clear conclusions, with 2 preventable deaths and reduced hospital admissions- each year.
- Birmingham's declaration of Natural Health Improvement Zones to directly tackle this issue would be a national and international first; as so far nowhere in the world has combined all these disciplines, of Public Health Protection, Environmental Heath, Transport and Arboriculture.

### **Societal benefits**

- Create 'non-obesogenic' environments, people will become more active.
- Quiet Roads can be declared for cycling, walking, and running and for 'safe routes to school'.
- Educational benefits can be gained by involving children.
- Child development through safe outdoor play.
- Trees bring shade.
- Adapt to climate change reducing the affects of the Urban Heat Island.
- Heat reduction is also linked to crime reduction.
- Quality of life improves greater sense of local pride and identity.
- Improve community cohesion through direct engagement.
- Fruit trees for gardens or community orchards – leading to healthy eating.
- Improved life expectancy & mental health.

### **Economic benefits**

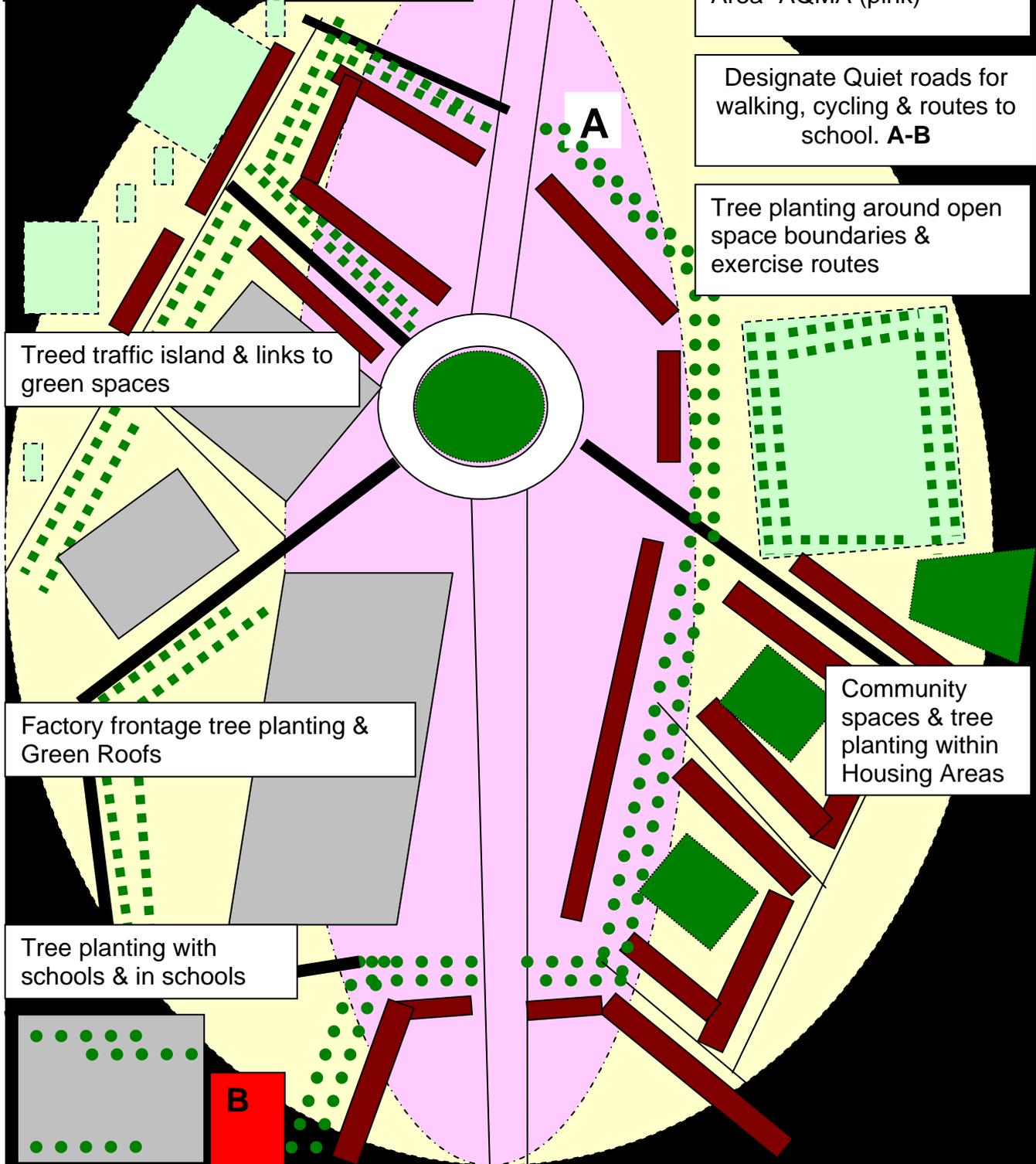
- Enhance Birmingham's reputation and image by achieving Tree City Status.
- Birmingham could become Britain's first Walkable City.
- Uplift in house prices of between 7-15% within tree lined roads.
- Inward investment attracted to high quality safe, clean and green environments.
- Traffic islands planted with trees reduces the cost of horticultural maintenance.
- Future tree maintenance cost reduced through 'right tree-right place' selection.
- Future income from managing trees for wood-fuel.
- Urban Trees reduce flash flooding following intense rainfall, reduce insurance.
- Urban trees will reduce the affects of Urban Heat Island & cool businesses.

### **Environmental benefits**

- Reduced use of cars, so reducing carbon emissions.
- In addition drivers have been shown to reduce speed down treed roads.
- Major contributor to helping to reduce the affects of the Urban Heat Island.
- There will be net benefits for the biodiversity of a locality as well as the city.
- Urban trees can act as effective links with the wider ecological network.
- The Birmingham Forest will penetrate urban communities who stand to gain most.
- Careful selection, planting and management to provide sustainable wood fuel.



**NATURAL HEALTH  
IMPROVEMENT ZONE**



Air Quality Management Area- AQMA (pink)

Designate Quiet roads for walking, cycling & routes to school. A-B

Tree planting around open space boundaries & exercise routes

Treed traffic island & links to green spaces

Factory frontage tree planting & Green Roofs

Tree planting with schools & in schools

Community spaces & tree planting within Housing Areas