

## **Obesity in Nottingham City**

### **What do we mean by Obesity?**

It is a term used to describe someone who is very overweight, with a high degree of body fat that may have a negative effect on their emotional and physical health and wellbeing.

For most adults, a body mass index (BMI):

- 18.5 to 24.9 suggests a healthy weight
- 25 to 29.9 suggests overweight
- 30 to 39.9 suggests obesity
- 40 or above suggests severe obesity

In children, there is no fixed BMI threshold. Age and sex dependent BMI centiles are used instead. A BMI greater than or equal to the 85th centile of the UK 1990 growth reference is considered overweight; greater than or equal to the 95th centile, obesity; and greater than or equal to the 98.6th centile, severe obesity.

### **Background**

Globally, obesity has nearly tripled since 1975 and by 2016. Obesity is considered to be one of the top three most costly (%GDP) social burdens generated by human beings globally, above air pollution, climate change, drug use and road accidents (McKinsey, 2014).

Obesity is a complex health issue and results from a combination of causes and contributing factors. While individual behaviour is a factor, it is underpinned by the interactions of our genes with the environmental, cultural, social and commercial determinants of health.

### **The impact of obesity**

Being overweight seriously affects people's quality of life and their health. It increases the risk of heart disease, stroke, type 2 diabetes, osteoarthritis, non-alcoholic fatty liver disease, and some cancers, in adults.

Obesity also puts children at serious risk of both immediate and long-term physical, emotional, psychological and social problems, and it is the poorest children who are most affected. Problems associated with being obesity in children include changes in blood lipids and glucose tolerance, increases in liver enzymes associated with fatty liver disease and the exacerbation of asthma as well as greater risk of hypertension, type 2 diabetes and multiple

tooth extractions. It is also associated with bullying, depression, anxiety, social isolation and stigma in both adults and children.

### **A life-course view**

The World Health Organisation (WHO) and Public Health England (PHE) recognise the importance of the life-course model in understanding and tackling non-communicable disease; this is similar for obesity. Factors during pre-conception (i.e. maternal/paternal health), pregnancy, the first 1001 days (from conception to a child's second birthday), later childhood, adolescence, through to adulthood, all influence the risk of experiencing overweight or obesity.

Children who are overweight or obese at age four to five years tend to remain so at age 10 to 11 years and are more likely to enter adulthood being overweight or obese, which puts them at increased risk of experiencing those chronic diseases outlined previously. (Public Health England, 2017).

While obesity can affect anyone, some people are at greater risk of becoming overweight or obese than others. Income, social deprivation and ethnicity all impact on the likelihood of becoming obese. (Marmot, 2010) The social gradient in obesity is linked to the accumulation of disadvantage throughout the life course and contributes to widening inequalities in obesity in adulthood (Law et al, 2007).

### **Size of the issue locally**

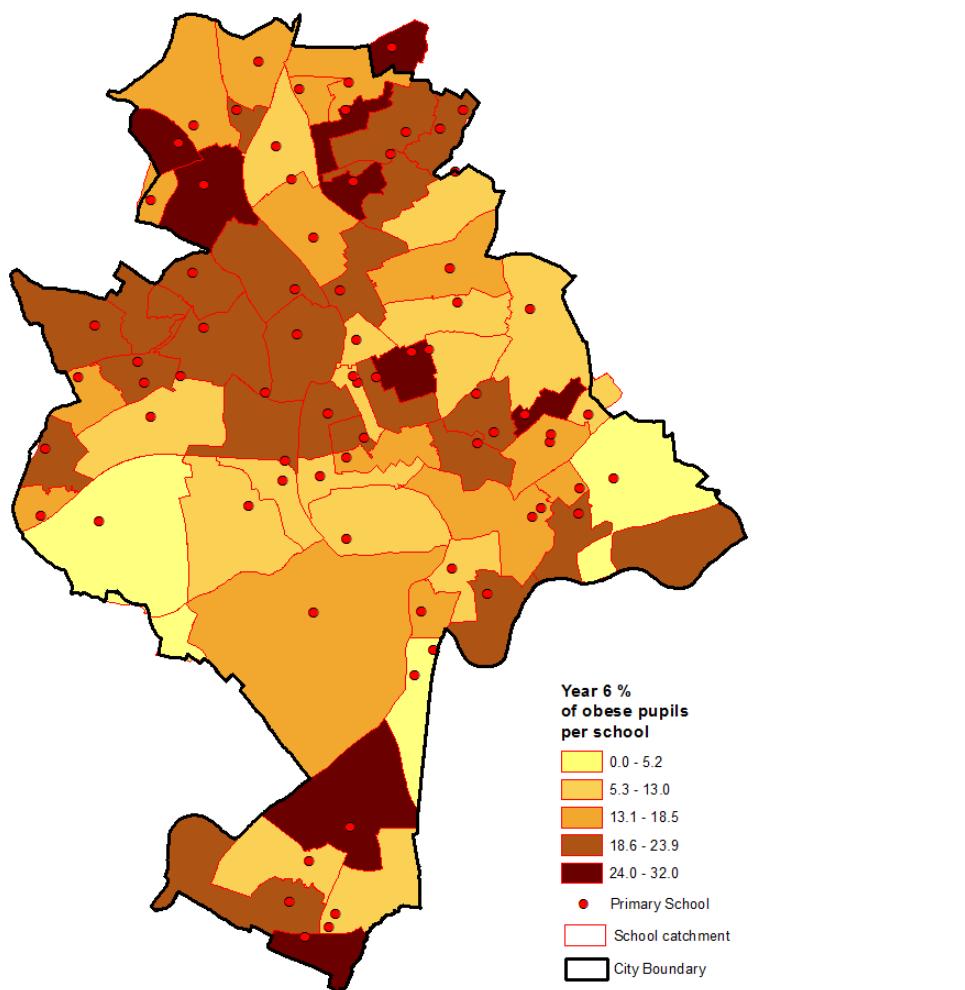
#### **Children**

The National Childhood Measurement Programme is a mandated function. It provides the data for the child excess weight indicators in the Public Health Outcomes Framework, and is part of the government's approach to tackling child obesity by annually measuring over one million children and providing reliable data on rates of childhood obesity. Children are measured in reception (aged 4–5 years) and year 6 (aged 10–11 years) in mainstream state-maintained schools in England.

The local NCMP is delivered by Nottingham CityCare Partnership school nursing service. Nurses record the height and weight measurements of all children in state-maintained schools in reception and year 6. Parents/carers of all children are sent a results letter for their child along with information, advice and support on achieving a healthy weight for their

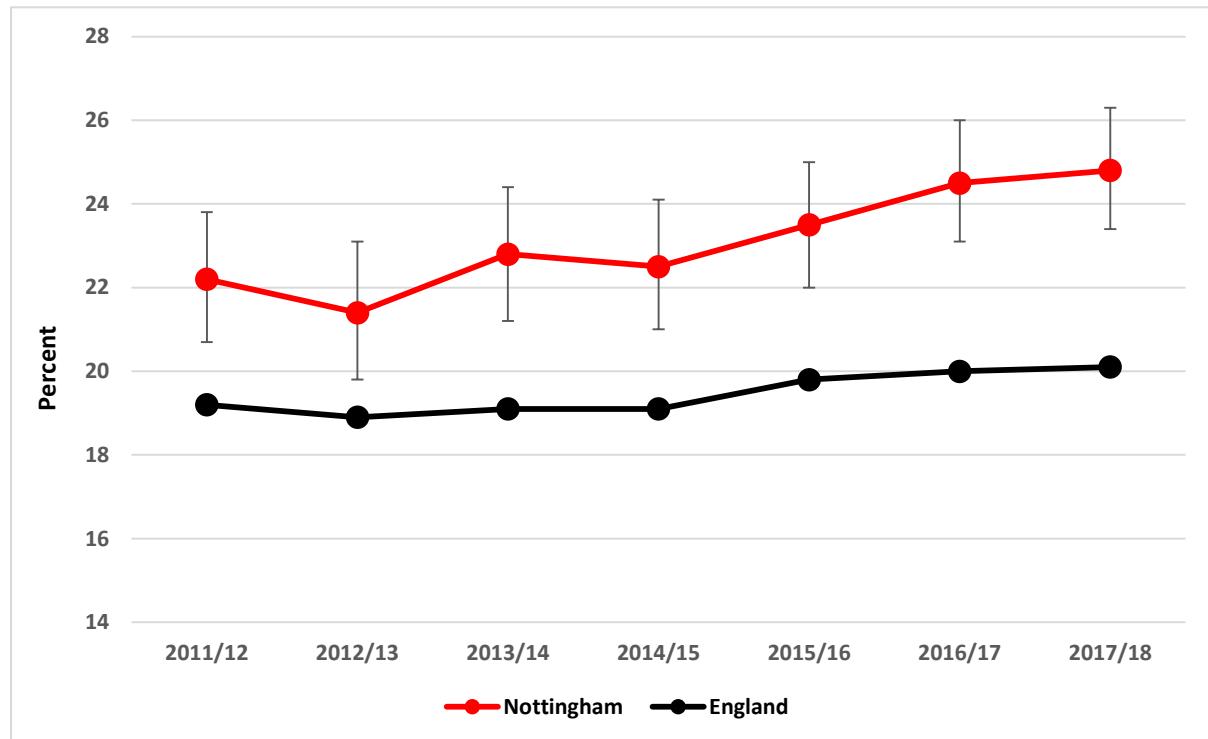
child. The data collected enables local areas to plan services to tackle child obesity and monitor progress.

At present, two in every five children in Nottingham City are overweight or obese (40.8%) by the time they leave primary school; the equivalent of 61 standard sized classrooms. Nottingham City has the 16th highest prevalence of obesity in Year 6 children. However, this issue is born much earlier with one in four children in reception being overweight or obese, in Nottingham (26.7%). Figure 1 shows a map of obesity among year 6 children by primary school catchment areas.



**Figure 1: map of obesity among year 6 children by primary school catchment areas.**

The prevalence of obesity in Year 6 children between 2011 and 2018 is shown in Figure 2 and suggests an upward trend following a period of relative consistency.



**Figure 2: Percentage of Year 6 children who are classified as obese in Nottingham (red) and England (black)**

These headline figures tell only part of the story with great variation across Nottingham's communities; those living in the most deprived areas are significantly more likely to have obesity than children in the least deprived areas (NCC, Obesity JSNA, 2016)

### **Adults**

The latest available data (2017/18) suggests that 63.6% of adults are estimated to be overweight or obese in Nottingham City, which is similar to the England average of 62% (Public Health Outcomes Framework, 2017/18).

Currently 1 in 4 (26%) of adults are suggested to have obesity in England. This has huge implications for health and social care. For example In 2016/17, there were 617,000 admissions in NHS hospitals where obesity was a factor. This is an increase of 18% compared to 2015/16 (NHS Digital, 2018).

As with many health issues, there are variations according to socio-economic group. For example, 38% of women in the most deprived areas were obese, compared with 20% of women in the least deprived areas (NHS Digital, 2018).

### **A complex system**

Public and media conversations are dominated by a persistent idea that the problem is driven by individual level choices; attributing weight problems to poor choices and laziness. This misplaced focus on individuals, increases stigma by placing attention on the behavioural decisions of those who are overweight and obese rather than on the context in which decisions are made. People in the UK today don't have less willpower and are not more gluttonous than previous generations.

Nor is their biology significantly different to that of their forefathers. Society, however, has radically altered over the past five decades, with major changes in work patterns, transport, food production and food sales (Butland et al 2007). Put simply, the way we live, work, travel, play, shop and eat has been transformed greatly in recent decades. There are over 100 different factors resulting in more than 300 reinforcing or balancing relationships that cause overweight or obesity.

To respond to this complexity it is important that we move away from the idea of obesity as being caused by 'lifestyle choices' and instead recognise that the true causes of obesity are often a result of environmental, social, political and economic pressures. We know that one to one interventions are important to help individuals tackle their own weight. This is not sufficient to tackle the issue, we cannot commission our way out of adult/children's obesity and must take action at a population level.

A collaborative, whole systems approach is understood to be more effective in promoting healthy weight in children, young people and families rather than single interventions on their own. There is no single most important intervention (Rutter, 2010).

This involves understanding and identifying the local aspects of the surrounding environment that may be a barrier to achieving a healthy weight e.g. a stocktake of local community actions and policies. It also requires bringing stakeholders from across the system together to create a map of the local factors that drive poor nutrition and physical activity. This mapping process is important to the whole approach - it allows stakeholders to recognise their role in the system and how they can make a difference. It also highlights how their actions can be aligned with those of other partners so everyone is working towards the same goal.

The latter stages of the process focus on taking actions forward as a group, continuously monitoring and revising them and reflecting on how things can be improved.

Making a whole system approach work despite the financial challenge we face as a health and social care system is important to the future health of our population.

## National action

### Childhood Obesity Plan: Chapter 2

Nationally, the government has outlined its plan to halve childhood obesity and significantly reduce the gap in obesity between children from the most and least deprived areas, by 2030. Many of the policies outlined below are currently under consultation with several additional consultations to take place this year. Until policy decisions are finalised the impact of this plan and its ability to achieve the challenging target of halving childhood obesity and reducing inequality, remain to be seen. (Childhood Obesity a Plan for Action Chapter 2, 2018)

**SUGAR REDUCTION**

- Consider **extending the SDIL** to milk based drinks if they fail to reduce sugar by 2020
- Consider **further use of tax system** if sugar reduction does not achieve the desired progress.
- Consult on introducing a **ban to end the sale of energy drinks to children**



**LABELLING**

- Mandate calorie labelling on the **out of home sector** (including online food delivery)
- Explore what **additional opportunities** leaving the EU presents for food labelling.



**RETAIL**

- Consult on **ban price promotions of HFSS food and drink** e.g. buy one get one free, multi-buy offers, unlimited refills etc.
- Consult on **ban the promotion of HFSS food and drink by location** e.g. checkout, end of aisles



***Our national ambition is to halve childhood obesity & significantly reduce the gap in obesity between children from most and least deprived areas, by 2030***

**LOCAL COMMUNITIES**

- Trailblazer programme to support LA
- Strengthen **Government Buying Standards** for food and catering services



**SCHOOLS**

- Review physical activity offer
- National ambition for **every primary school** to adopt an active mile initiative
- Update standards for school foods and ensure compliance
- Consult on use of **health start vouchers** to support low income families



Source: Take from Childhood Obesity a Plan for Action Chapter 2 (2018)

## **NHS Long Term Plan**

The NHS plan makes a commitment to offer targeted support and access to weight management in primary care for people with a diagnosis of type 2 diabetes or hypertension with a BMI of greater than or equal to 30kg/m<sup>2</sup>.

In 2011, it was estimated that 53% of the men and 44% of the women with a BMI >30kg/m<sup>2</sup> had hypertension (NHS, 2013). This represents a significant increase in the provision of weight management services both as a system and those funded by the NHS.

## **What are we doing for children?**

Reducing childhood obesity is important to the future of our health and social care system as almost 30% of the total burden of ill health experienced by Nottingham City adults, is due to poor diet and excess weight.

Nottingham City is ranked the fourth most-deprived area in England according to the Income Deprivation Affecting Children Index. Over 25,000 children (38%) live in poverty. In some areas of the city this figure rises to over half (Arboretum – 52%) yet in others it is below one in five (Wollaton West - 17%). Inequalities in childhood obesity and health arise out of inequalities in society - they are not inevitable and need to be reduced. Therefore, our collective actions to reduce inequalities and act to improve life in the first 1001 days for our children and families contribute towards this agenda.

Our approach to childhood obesity includes two key areas of focus; a review of 0-19y weight management services and a whole system approach.

### **1. Integrate public health nutrition across 0-19y children's services**

Nottingham CityCare fulfil the 0-19y service contract including children's weight management (Tier 2). These services have remained largely unchanged for a number of years. Nottingham City CCG provides a Tier 3 intervention for those with severe levels of excess weight and those with more complex health issues.

A review of referral pathways is currently underway to a) make use of integrated 0-19 services and incorporate a nutrition pathway across this range of children's services; and b) to ensure appropriate referral criteria for Tier 2 services and joined up pathways with other related services.

A literature review has also been conducted on children's weight management services. This will inform decisions on how to structure Tier 2 services and help consideration of the balance between the need for prevention in early years with weight management services in those leaving primary school.

## **2. Eating and moving for good health (a whole system approach)**

Nottingham City will take a whole system approach to childhood obesity and, more broadly, eating and moving for good health. Reversing the current trend will require action at a national, regional and local level, drawing on the influence of the wider health and social care system and community assets.

Nottingham City Council aims to help its health and social care partners including the voluntary sector, take the first steps on the journey to a whole system approach. However, the challenge to all involved will be to take collective ownership of this issue.

This programme of work is underway and will act across a number of drivers and look to change the way we think about the issue. The three drivers below describe the breadth of the system approach:

- 1) The services that support and guide families from birth.  
Example levers: early intervention programmes, children's services, voluntary sector
- 2) The messages and people from whom children learn  
Example levers: education, families, commercial marketing etc.
- 3) The places and communities in which families live and play  
Example levers: Community, planning, open spaces, sport & leisure, transport

Nottingham is working within the PHE Whole systems framework. A network analysis is currently exploring who in Nottingham City works on helping children 'eat and move for good health' in the city with the intention of inviting them to a workshop to identify the key local drivers that are amenable to change by the system. This work is already underway and taking place across various areas to include planning and breast-feeding. In addition, there are various community level projects on eating and moving for good health, which exists across the city. Some examples include:

- **Arkwright Meadows Community Garden**, cook and eat sessions, cycling with Ridewise and evening yoga.
- **Bulwell Forest Garden**, lunch club, yoga and events such as the International Food Festival.

- *Ecoworks, St Anns, weekly dig and dinner, social eating, gardening and cooking skills*
- *Nottingham Good Food Partnership, cook and eat sessions delivered in schools, community cafes, pick your own fruit, social eating spaces, food sharing projects*

A key part of the PHE Whole systems framework is to hold a stakeholder workshop to explore the key local drivers of obesity that are amenable to change by the system. The workshop is scheduled to take place in the summer; the findings from the workshop will help determine the future direction of the work.

In addition, we will look for opportunities to build on our links with Small Steps Big Changes (SSBC) and their family mentor network, an overview of the initiatives provided by SSBC are detailed below. We will also build on our communities assets and similarly, we will be working closely with Active Notts who have received seed funding from Sport England to explore system engagement on physical inactivity and, in particular, community co-production.

### **3. Small Steps Big Changes – An early years approach to diet, nutrition and physical activity**

Small Steps Big Changes (SSBC) is supported by Big Lottery's 10 year 'A Better Start' funding programme designed to improve the lives of Nottingham's young children. The SSBC programme covers the areas of Aspley, Bulwell, Hyson Green & Arboretum and St Ann's and seeks to deliver successful child development outcomes and give every child the best start in life.

#### **Cook and Play (Age 0-5yrs)**

This initiative is commissioned by SSBC and delivered by the Family Mentor Service across all 4 wards. During a Cook and Play session parents/carers participate in practical cooking, learning about healthy eating, low cost and assertive feeding practices followed by eating or tasting the resulting meal with their child. A short food sensory activity is facilitated with the children to increase familiarity with ingredients used in the recipes. Age range 0-4yrs.

This continues to be one of our most popular groups across all wards. In 2018/19, 300 children attended (with a parent carer), a 94% increase on the previous year. Attendance has also increased.

#### **Nutrition E-learning Package**

This package was developed by SSBC and the CityCare nutrition team and hosted by the virtual college. This evidence based tool is designed to increase the knowledge base of the Family Mentors. It covers three modules: an ‘overview of Nottingham City Health’; ‘Introduction to healthy eating’; and an ‘Overview of infant feeding’.

### Ideas Funds

The Ideas Fund offers a great opportunity for local parents, local community groups and local organisations to pilot and test new ideas for service development and delivery and evaluate new initiatives designed to help us achieve our programme outcomes.

The following initiatives are supported by SSBC with regards diet, nutrition and physical activity:

- **Alive N Kicking** – delivered by Everyone Health. A course of six workshops for parents, which focus on the key factors influencing a child’s weight and health.
- **Healthy Beginnings Healthy Futures** – delivered by Nottingham Citycare Interactive and pictorial booklet resource to support parents with toddlers at risk of obesity.

SSBC also commissions a number of initiatives related to diet, nutrition and physical activity including for oral health:

- **Pregnancy yoga** - multifaceted approach to exercise that encourages stretching, mental centering and focused breathing.
- **Oral health** – An expanding programme of work including supervised tooth brushing in nurseries; promotion of oral health and dental checks in pregnancy; promotion of dental checks by one year of age; and toothbrushes and toothpaste to vulnerable families.
- **Baby Buddy App** –aimed at younger mothers, it focuses largely on physical health and wellbeing of mother and baby, bonding and attachment, and recognising mental health issues.
- **Bump, Birth and Baby** –antenatal and postnatal education groups that allow parents the time to explore their worries and aspirations in becoming parents and to form their own parenting toolkit to support them on their journey.
- **Small Steps at Home Programme** –offers a universal home visit to all families in SSBC wards. A peer workforce of Family Mentors provide activities, learning and tips to support social and emotional development, communication and language development, and diet and nutrition. In 2018/19, 1013 families benefited from the small steps at home programme.

### What are we doing for adults?

#### 1. Weight management on referral – Slimming World

Slimming World have been commissioned to deliver weight management via GP referral, consisting of 12-week classes at daytime, evening and weekend locations across the city. There is strong body of evidence to support weight loss achieved at 12 months for commercial weight management groups and Slimming World has a good history of working in partnership with local authorities. Priority groups include people with learning disabilities; people with mental health problems; pregnant women; people of African, Caribbean or South Asian descent; and men. Professional working with these groups are signposting service users or patients to Slimming World.

## **2. Digital weight management course - Ladle**

Digital behaviour change interventions, such as websites or smartphone apps, are becoming increasingly popular (NHS Digital, 2018). In order to improve citizen choice and accessibility, Nottingham City Council have commissioned Ladle to deliver a weight management online course. This was developed with Professor Jane Ogden at Surrey University and NHS dieticians. Patients access Ladle via their GP or practice nurse and this enables them to gain free access to the online course, usually completed over 12 weeks. It is also being marketed widely to staff and citizens to expand reach. The course employs psychological research and tools to tackle emotional eating, hunger tolerance, slips and body image.

## **3. Workforce Health & Wellbeing**

### *Healthier options in Loxley restaurant*

Public Health are working in partnership with *Eat Culture*, the restaurant at Loxley House, to explore healthier food and drink options. This included a staff survey to ascertain preferences, values and gauge buy-in for proposed changes. Happily, the 300 responses received gave a clear mandate to proceed. Eighty-five percent of respondents were interested in making healthier food choices. Staff wanted more information in order to make choices, including details of food preparation techniques, calorie labelling etc. and there was a call for more vegan and vegetarian options. To this end, the restaurant are piloting a number of initiatives including food preparation factsheets with menus, calorie counts on standard items and healthier swaps.

### *Nottingham University Hospitals NHS Trust*

The 'Improving staff health and wellbeing' CQUIN, introduced in 2016/17, was extended and updated for 2017-19. The CQUIN requires NHS trusts to maintain the four changes from 2016/17: banning price promotions, advertising and checkout placement of sugary drinks

and food high in fat, sugar or salt as well as ensuring the availability of health options for staff working night shifts. In addition, the CQUIN set targets for the percentage of drinks lines that are sugar free (<5g/100ml); the proportion of confectionary that does not exceed 250kcal; and the proportion of pre-packed sandwiches and meals no exceeding 5g of saturated fat per 100g.

Nottingham University Hospitals has achieved the targets set within the CQUIN. It has done so by setting up a small working group to oversee implementation of the changes. The Estates team, who have responsibility for catering, led the group that also included other staff such as the dietetic technician and partners from the staff wellbeing partnership. Elior, NUH's main catering provider, is also, engaged and committed to the changes. Senior representatives of Elior attend the NUH staff wellbeing steering group and provide quarterly updates.

Progress was monitored through regular audit. Providers not meeting the requirements were challenged and, if necessary, issues escalated to NUH's contracts team. One of the most challenging aspects of the CQUIN was ensuring the compliance of vending machines with the existing providers less willing to engage locally resulting in a new contract being awarded.

In addition to the changes to the food environment, the staff wellbeing programme and dietetics team partner to provide staff healthy eating advice, promotions, weight loss groups alongside health checks and physical activity programmes.

#### **4. Sport England Local Delivery Pilot: Community co-production**

Nottingham submitted an application to be part of the [Sport England Local Delivery Pilot Programme](#). Whilst unsuccessful in becoming one of the ten pilot areas chosen, the strengths of our bid were recognised by Sport England and key elements have been funded.

##### *The Ambition*

We are looking to:

- a) create a culture shift whereby regular physical activity is the norm, is seen as an easy choice and central to good health and wellbeing
- b) connect the wider system (at all levels) through a shared purpose, with the community at the heart
- c) test the principles of an asset-based community development approach and through this inspire behaviour change both within communities (people more active) and within the

system (creating the conditions in the system to respond to the needs of people and communities).

### *Our Approach*

Through our Local Delivery Pilot, we are engaging in an asset-based approach, working intensively with a small number of communities to develop a deeper understanding, testing behaviour change theories and a whole system approach to building active, vibrant communities.

This will require co-ordinated action, connection and integration across multiple sectors including health, education, social care, planning, housing, transport, environment, leisure, arts, culture, the voluntary and community sectors and business to bring about major change to combating inactivity.

Our work is characterised by the following:

- a recognition that physical inactivity is a product of a complex web of interacting and changing causes and influences and as such requires a cross sector approach, a move away from silo-based interventions and a strong common purpose
- co-production of solutions by and with the community with the ‘system’ adapting and changing to support this
- a culture of sharing what works and what doesn’t work at all levels of the system
- a recognition that how active someone is, is influenced by a range of different factors around them that are way beyond the limits of their own motivation and way beyond the control of any single club, school, leisure centre, service or programme.

### *Our Priority Places*

This work in Nottingham will focus on three priority places. An analysis of activity levels in people in Nottingham (using Sport England Active Lives data) shows that the greatest concern for the city is for people in lower socio-economic groups (NS SEC 6-8) where stubborn inequalities exist. Our three priority places are in the top five MSOAs in the city for lowest Healthy Life Expectancy and lowest levels of physical activity and have a high proportion of people in NS SEC 6-8 compared to the city average. The different dominant demographics and varied asset base in each place will allow us to identify what is replicable

and potentially scalable, and what factors are unique to each community as part of our learning. Our places are:

- Bulwell MSOA 002: located in north Bulwell, including the Bulwell Hall Estate
- St Ann's MSOA 021: between the St Ann's Allotments and Carlton Road
- Bilborough/Leen Valley LSOA 020: either side of the Wigman Road and including the Beechdale estate

### *Governance and Funding*

This is phase one of the work which is about securing strategic commitment and developing a genuine understanding of community needs with regards to physical activity to identify and generate future action, for which funding will be sought as appropriate. A Leadership Board chaired by Alex Norris MP to oversee Phase 1 has been established and will have responsibility for the leadership and financial scrutiny of the investment. A dedicated strategic post is employed by the Active Partners Trust but is physically placed within the One Nottingham team providing access and connection to senior leadership in Nottingham City Council and wider Nottingham partners.

### **Recommendations for the Board**

- Commit to the Nottingham City Council objective of reducing childhood obesity by 10% by 2023
- Encourage conversations with citizens on moving and eating for good health and, where appropriate, refer citizens to one of the weight management services available in Nottingham City.
- Current actions have had limited impact on the prevalence of childhood or adult obesity. A commitment to new approaches is required ensuring all organisations consider the role they can play and act to improve nutrition and physical activity amongst Nottingham City citizens.
  - This should include signing up to the Physical Activity and Nutrition Declaration which has been previously endorsed by the Health & Wellbeing Board.

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