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	Health and Well-Being Board 12 March 15
Title	**Developing a strategic approach to obesity in Barnet for adults and children**
Report of	Andrew Howe Director of Public Health
Wards	All
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Status	Public
Enclosures	Appendix 1: NCMP Briefing Barnet Appendix 2: Service Specification for Children's Tier 2 weight management service Appendix 3: Adult Tier 2 Weight management service business case
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Summary

The Government's call to action Healthy Lives, Healthy People sets out the overarching vision and framework for improving public health outcomes in England. There were two national ambitions for obesity:

- a sustained downward trend in the level of excess weight in children by 2020
- a downward trend in the level of excess weight averaged across all adults by 2020.

To tackle these issues, a life course approach is required that includes agreed actions from all partners in a co-ordinated strategy. The impact of obesity extends well beyond the NHS and impacts on local authorities. Healthy Lives, Healthy people identifies that local authorities are best placed to drive the response to the root causes of obesity, beyond

behaviour change.

In Barnet, some progress has been made to commence the development of a response to obesity but partnership response has been slow; what is required now is an agreed systematic approach.

This paper aims to advise the Board on the steps which Health and Well-Being boards and partners would be expected to be taking and to agree these.

Recommendations
1. The Board agree that tackling obesity is a priority and ensures partners engage with the system-wide approach recommended for both children and adults, in particular that the obesity care pathway is developed with partners and that the CCG attend and engage with the steering groups and review their tier 3 provision.
2. To agree to the development of a strategic statement and action plan, based on the needs assessment and stakeholder events, which all partners should sign up to facilitating system wide action.
3. The Board supports the commissioning of a tier 2 adult weight management service as set out in the Public Health Commissioning Plan (2015 – 2020); develop the weight management offer.

1. WHY THIS REPORT IS NEEDED

1.1 Obesity, diet and lack of physical activity are, after smoking, the most important causes of ill health and premature death. Obesity substantially contributes to the risks of hypertension, diabetes and heart disease, respiratory problems, several cancers, dementia and renal failure. Morbid obesity is associated with 9 years loss of life – equivalent to life-long smoking. If trends continued at the current rate it is estimated that 60 per cent of men, 50 per cent of women and 25 per cent of under-20- year-olds could be obese by 2050.

1.2 There is particular concern about the rise of childhood obesity and the implications of obesity persisting into adulthood. Obese children may also suffer psychological problems such as social isolation, low self-esteem, teasing and bullying. Obesity among children and young people is closely linked with socioeconomic status. Children from more deprived backgrounds have higher levels of obesity.

1.3 The Government's call to action Healthy Lives, Healthy People (Public Health Outcomes Framework, 2012) sets out the overarching vision and framework for improving public health outcomes in England. There were two national ambitions for obesity:

- A sustained downward trend in the level of excess weight in children by 2020
- A downward trend in the level of excess weight1 averaged across all adults by 2020.

1.4 Healthy Lives, Healthy People (2012) recognised that managing weight was an individual's responsibility but also identified that local authorities are uniquely placed to lead the drive to tackle some of the root causes of obesity through planning, transport, education, social care, environmental health as each community had different characteristics and problems that were best addressed at a local level.

1.5 This was to become especially important in 2013 when public health moved into local government, when the responsibility for commissioning tier 1 and tier 2 services for weight management would also fall to local authorities. The responsibility for tier 3 services and onward were to remain with the NHS, but with an overall arching strategic view for planning with local government, in particular health and well being boards. This built upon the life course approach supported in previous reports such as the Foresight report in 2007 and the Marmot Review in 2010 which advocated making the messages and support to maintain a healthy weight consistent from 'cradle to grave'. The emphasis has been to promote individual empowerment, give all partners the opportunity to reduce obesity and transfer the responsibility for prevention to local government.

1.6 The different tiers of services for excess weight together form a coherent weight management care pathway for adults and children as follows:

Tiers	**Description**	**Commissioning responsibility**
Tier 1	Universal interventions – prevention and reinforcement of healthy eating and physical activity, including public health campaigns and brief advice	Local Authority
Tier 2	Lifestyle weight management services – usually time limited	Local Authority
Tier 3	Clinician-led multi-disciplinary team supporting morbidly obese patients or those who are overweight or obese and have significant comorbidities or complex needs (for example, learning disabilities or other additional support needs.	Clinical Commissioning Group

[1] The target for obesity and overweight was combined in Healthy Lives, Healthy People and renamed excess weight. Therefore when excess weight is referred to this means overweight and obese, these are no longer measured separately.

	In addition, referral to tier 3 could be considered for patients: • the underlying causes of being overweight or obese need to be assessed • the person has complex disease states and/or needs that cannot be managed adequately in tier 2 • conventional treatment has been unsuccessful • drug treatment is being considered for a person with a BMI more than 50 kg/m^2 • specialist interventions (such as a very low-calorie diet) may be needed or • surgery is being considered.	
Tier 4	Bariatric surgery supported by multi-disciplinary team, pre and post operation	NHS England[2]

1.7 Adult excess weight (overweight and obesity) is identified as an indicator for the Public Health Outcomes Framework 2013-16 for England.

2. OBESITY IN ADULTS AND CHILDREN – BARNET

2.1 Assessment of need - adults

2.1.1 There has been a marked national increase in the proportion of people who have been categorised as obese (BMI 30kg/m2 or over). 13% of men were categorised as obese in 1993 compared with 25% in 2011 and 16% of women were obese in 1993 to 26% in 2011 in the Health Survey for England. Over both sexes the increase has been from 15% in 1993-5 to just below 25% in 2011.

2.1.2 Obesity prevalence is challenging to report accurately as BMI is not routinely collected by all GP practices. It is assumed that the upward trend observed on a national level is reflected in Barnet. Previously obesity has been estimated using the Health Survey for England sample modelled estimate. This data has been succeeded by the Active People Survey (Sport England 2012) which has a self reported weight measure for adults, with the latest data released in February 2014. It reported that Barnet has lower prevalence of excess weight (obese and overweight together) 55.60% compared to England (63.8%) London (57.3%) and neighbouring boroughs. However, this is a self reported measure and may be subject to some under-reporting.

[2] Note that the transfer of Morbid Obesity Surgery Services will transfer from NHS-E to CCG's in April 2016. It was due to happen April 2015 but due to concerns raised during the consultation process, it has been delayed 1-year. For further details and to read to consultation paper, go to: https://www.gov.uk/government/consultations/transferring-services-from-nhs-england-to-ccgs

2.2 Assessment of need – children

2.2.1 Categorising weight for children is more complex than for adults. The child's height and weight is plotted on a growth reference chart (the UK 1990 BMI charts are used for the NCMP – National Child Measurement Programme), to give age- and gender-specific category.

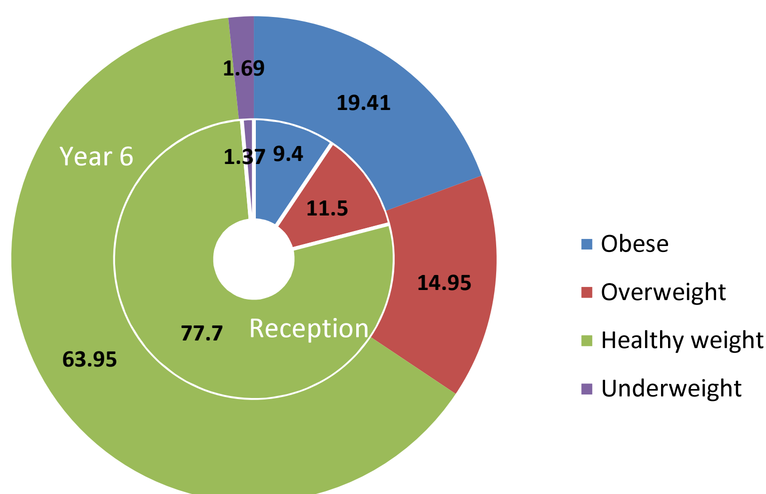
2.2.2 Levels of overweight and obesity remain lower than the National and London average in Barnet for reception children attending school in the borough, while the picture for year 6 children is mixed.

2.2.3 The most recent NCMP (2013/14) data shows that 11.5% of reception age children were overweight in Barnet and 9.4% of reception children were obese. Over the last 8 years, overweight and obesity levels in this group have fluctuated - overweight prevalence is currently at the same level as 8 years ago whereas obesity levels are slightly higher which is in contrast to the London and national trend which has been downward.

2.2.4 For year 6 children, the latest data shows that 19.4% are obese and 14.6 %(higher than the national average) are overweight. In the last 8 years there has been a marked increase in obesity in Year 6 children of 2% for Barnet; from 17.4% to 19.4%. This is similar to the upward trend seen nationally and in London. See Appendix 2 for further information.

2.2.5 Figure 1 shows that in 2013/14, prevalence of obesity in year 6 children was double that of reception children.

Figure 1: Percentage of children by weight category, Barnet, 2013/14



3. COST OF OBESITY

3.1 Nationally, treating the effects of obesity cost the NHS £5 billion a year. The wider cost to the economy is estimated at closer to £20 billion a year when factors such as lost of productivity and sick days are taken into account.

3.2 Although Barnet's excess weight is lower than the London and England average, there are approximately 160,000 adults (16+) within the Borough who are overweight or obese. This poses a significant challenge to the local economy. The total cost of overweight and obesity nationally is estimated to be £94.4 million by 2015.

3.3 In terms of social care and health, in England more than 15 million people have a long-term condition and the care for people with long-term conditions accounts for 70% of total health and social care spend. There are resource implications for the cost of social care for adults with severe obesity, for example, housing adaptations, care arrangements for those who are housebound and transport.

4. EVIDENCE AND NEEDS ASSESSMENT

4.1 Weight gain results from energy imbalance: people are eating too much for the amount of physical activity they undertake. A balanced diet and physical activity are both essential for maintaining health. However, over the last 10 years, average adult energy expenditure has decreased by as much as 30%, suggesting that declining levels of physical activity are of particular importance in rising obesity levels. Obesity can also be linked to factors such as, environmental, genetic, psychological and social/cultural.

4.2 The effective approach to preventing and treating obesity is provided by NICE (National Institute for Health and Care Excellence), which offers guidance on how clinicians should assess obesity, what they should do to treat obesity, how people can remain at a healthy weight and how to make healthy food choices easier for everyone.

4.3 The public health team conducted a needs assessment on obesity in 2014 and the details of this are being updated to reflect changes in guidance. The purpose of this needs assessment was to create an accurate picture and identify need relating to obesity in the London Borough of Barnet for both adults and children. The needs assessment presents available national, regional and local data to establish the current and the projected future prevalence of obesity. Methodologically, this report includes a review of quantitative data to assess levels of obesity in Barnet and model current need and demand. It also notes that there has been no strategic approach to managing overweight and obesity and that this needs to be rectified to improve wellbeing, and help reduce future health and social care costs.

4.4 Examining the latest Census results for the Barnet population with higher risk groups in mind allows more understanding of the obesity picture in the borough. Barnet has slightly higher proportion of children living in poverty (21.2%) when compared to the England average (21.1%) although this is a not statistically significant difference in proportion. This child poverty measure is determined by the level of children in families who are receiving means tested benefits and low income.

4.5 Asian and some other ethnic populations are at greater risk of obesity and Barnet has a high level of residents who are Asian (32%) when compared to the England average (12%) and also Black, Black African, Caribbean or Black British (8%) compared with England as a whole (3%). Barnet has only 5% of its population living in an area which is ranked as in the most deprived 20% of the country which is considerably less than the England average of 20.3%.

5. OPPORTUNITIES TO ADDRESS OBESITY IN BARNET: PHYSICAL ACTVITIY IN ADULTS AND CHILDREN IN BARNET

5.1 The benefits of physical activity are clear in terms of promoting health and preventing disease and staying active is an important factor in maintaining a healthy weight and a helpful method of reducing weight. Beginning at a young age, physical activity is an essential component for energy balance and weight control. Men and women who are more physically active tend to have lower BMIs and smaller waist circumferences.

5.2 The Chief Medical Officer's (CMO’s) current minimum recommendation states that over a week activity should add up to at least 150 minutes (2 ½ hours) of moderate intensity activity in bouts of 10 minutes or more. One way to approach this is to do 30 minutes on at least 5 days a week. Alternatively, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or combinations of moderate and vigorous intensity activity.

5.3 The CMO guidelines state that children of pre-school age who are capable of walking unaided should be physically active daily for at least 180 minutes (3 hours), spread throughout the day. Most UK pre-school children currently spend 120–150 minutes a day in physical activity, so achieving this guideline would mean adding another 30–60 minutes per day.

5.4 Children aged 5-18 years should engage in moderate to vigorous intensity physical activity for at least 60 minutes and up to several hours every day. Vigorous intensity activities, including those that strengthen muscle and bone, should be incorporated at least three days a week. All children and young people should minimise the amount of time spent being sedentary (sitting) for extended periods.

5.5 The British Heart Foundation, Physical Activity Statistics 2015, used accelerometers as a direct measure of physical activity in a cohort of children. This direct assessment found that showed that none of the 11- to 15-year-old girls and only 7% of boys they measured actually did enough exercise.

5.6 The percentage of adults in Barnet achieving the Chief Medical Officers minimum level of physical activity of 150 or more minutes per week is 56% which is same as the national average. Just over a quarter of Barnet adult residents (26%) get less than 30 minutes of physical activity each week.

5.7 Physical activity data for children is limited, however, sedentary time is at least as important as moderate physical activity as a disease factor. Sedentary behaviour is not merely the absence of physical activity; rather it is a class of behaviours that involve low levels of energy expenditure. The HSE 2012 (Health Survey for England, 2012) asked children about the amount of time spent in sedentary pursuits including time spent watching television, other screen time, reading and other sedentary pursuits.

5.8 The HSE found:

- Average total sedentary time (excluding time at school) was similar for boys and girls on weekdays (3.3 hours and 3.2 hours respectively) and weekend days (4.2 hours and 4.0 hours respectively).
- For both boys and girls, the average number of hours spent watching TV on both weekdays and weekend days increased as equivalised household income decreased.
- The Barnet Sport and Physical Activity Needs Assessment conducted in 2012 included market segmentation of the Barnet population describing the different characteristics, motivations and behaviours of the population including the most significant barriers to participation for different groups. It suggests for example that young mothers often find sport and leisure opportunities inconvenient, particularly with regard to childcare provision. Middle aged adults tend to have busy lifestyles, mostly due to work commitments, which impacts on the time they can make available for physical activity. For older adults, health, injury and disability are the most common barrier to exercise.

5.9 There has been detailed work on the motivations for physical activity as part of the work of the SPA board and the leisure procurement work and this can provided in further detail if the board requires this.

6. APPROACH

6.1 The approach recommended by this paper is that an obesity strategy and action plan is developed to take account of the responsibilities of the Board and the opportunities for integrating this into council business with key partners. The key themes of the strategy may be expressed in terms of:

6.1.1 Developing a strategic steering group to support the development of a shared action plan for adults and children.

6.1.2 Service planning – ensuring that services for children and adults are in place from tiers 1 to 4 and that there is a clear pathway for referral into and between all tiers.

6.1.3 Developing a strategic approach to obesity through planning, built and green environments

6.1.4 Developing a strategic response to tackling environments that are not supportive for obesity prevention

7. PROGRESS TO DATE

7.1 Developing a strategic steering group to support the development of a shared action plan for adults and children

7.1.1 In June 2014 a stakeholder event took place which looked at the steps required to begin looking at a whole systems approach to obesity in Barnet. This was well attended by LLB officers, the voluntary sector, tertiary NHS services and others but there was a low attendance from primary care. Following this event it was the intention to form a strategy group with two sub groups – one on adults and one on children. The strategy group was not successful in gaining commitment from all partners essential for taking the work forward and did not meet. However, the Children's Obesity Pathway subgroup was formed and has met three times. It is well attended but currently lacking GP clinical input. The group has been refining the pathway for children and young people and has contributed to the planning and development of a Children's Tier 2 Weight Management Programme.

7.2 Service planning – ensuring that services for children and adults are in place.

7.2.1 Tier 1 services at prevention level are well represented. There are several services that support people to be physically active in the borough such as health walks, outdoor gyms and the activator programme and various physical activity provisions for older adults. Interventions aimed at enabling children to be more active and improving healthy eating habits are available in children's centres and schools.

7.2.2 A tier 2 family based weight management programme for children has been commissioned by Public Health and the service will commence in April 2015 (Appendix 2). A business case for an Adult Tier 2 weight management service has been developed (Appendix 3), for consideration by the board. It outlines the evidence base for the intervention planned.

7.2.3 It is recommended that £49,999 over two years be allocated from the Commissioning Intentions Budget (Weight management) to fund an Adult Tier 2 weight management service.

7.2.4 The Adult Tier 2 weight management services will be multi-component in line with the NICE guidelines to achieve weight loss or to prevent weight gain as single strategy approaches are less effective on their own. These will include behaviour change strategies to increase physical activity levels or to reduce sedentary behaviour, improve eating behaviour and reduce energy intake. The aim of the service is to prevent further weight gain, promote modest

reductions in body weight and minimise weight regain amongst adults who are overweight or obese to improve associated co-morbidities, risk factors and quality of life.

7.2.5 The services will be free of charge to participants and long-term ongoing support will be provided. Services will be available locality wide and during the day, evening and weekends. Key stakeholders will be engaged in the ongoing development and governance of the programme.

7.2.6 Tier 3 services are commissioned by CCG and tier 4 services by NHSE. Current tier 3 services are not in line with NICE recommendations i.e. they are not multi-component and presently only consist of specialist dieticians whose remit is wider than just obesity. Preliminary scoping conducted through the Children's Obesity Pathway Group found that services are not multi-disciplinary, referral pathways can be convoluted and that the paediatric dieticians are over-stretched and, therefore, many high-risk children are not receiving a NICE compliant service

7.2.7 The implementation of tier 1 and 2 services will support NHS commissioners to plan for Tier 3 services and beyond. The steering group and action plan can also assist in supporting NHS partners in defining and planning these services.

7.3 Developing a strategic approach to obesity through planning, built and green environments

7.3.1 Creating environments that are conducive to preventing obesity and maintaining weight has become high profile since public health moved in to local authorities with the use of public spaces, the ways in which built environments are developed and how open spaces are used central to this. With this in mind public health has begun discussions with planning with regards to how regeneration and redevelopment can be influenced to encourage physical activity and promote schemes that reduce obesity – such as shared spaces, cycling and walking schemes, through the Parks and Open Spaces Strategy. A recent paper from the Town and Country Panning Association, published in December 2014 identified that there are common elements that a collaborative approach to a healthy-weight environment will need to consider. These have been the starting point for our discussions, and it is intended to map activity against these and incorporate these into the strategy and action plan, if agreed.

7.4 Developing a strategic response to tackling environments that are not supportive for obesity prevention

7.4.1 In addition there are programmes in place such as the Healthier Catering Commitment which aims to look at existing food provision in order to encourage healthier options. In Barnet we have revised the scheme and introduced three levels of achievement – bronze, silver and gold and these were launched last year. Local businesses are supported to change menus and offer additional choices and receive an award once they have completed

the changes. Where new developments or contracts are awarded (for example leisure provider) it is intended to attempt to ensure that the HCC award becomes a requirement. Both catering facilities within NLBP have achieved the award. Mapping of fast food outlets has also been undertaken and this will be used to inform the strategy and action plan. Public Health is looking to review other initiatives already being undertaken by the London Healthier high Streets Group to incorporate the broad approach recommended by the TCPA Paper[3].

7.5 **Promoting Physical Activity**

7.5.1 Physical Activity in Barnet there is a need to ensure that the population is given the best chance to reduce weight and prevent excess weight where possible. We have begun to tackle this through the development of physical activity initiatives to encourage people to become more active and now need to look more closely at assisting people with excess weight to manage their weight more effectively themselves and prevent obesity in others. In addition, we need to ensure that front line health and social care staff are enabled to raise the subject with clients effectively and signpost them to appropriate services.

7.5.2 The council is already working to address inactivity through the Sport and Physical Activity Strategy statement and the four objectives of SPA have been incorporated into the work on physical activity, the Fit and Active Barnet Partnership Board, and the leisure services re-procurement process.

7.5.3 These have been incorporated into the re-procurement of the leisure services and an innovative approach has been developed to ensure that wider public health outcomes are incorporated into the approach to leisure. The values of the SPA objectives are also incorporated.

8. NEXT STEPS REQUIRED TO FURTHER PROGRESS

8.1 Commitment of partners to a strategic perspective and whole systems approach and develop a strategic partnership group to support the development of an action plan.

8.2 Adult tier 2 weight management programme which is an identified gap is commissioned in line with childrens pathway.

8.3 There is an urgent need to review CCG commissioning of Tier 3 services for both children and adults in line with NICE guidance.

8.4 There is a need to ensure a clear pathway exists, which clarifies the referral pathways and the ongoing care pathways for both children and adults. This should include clarification of how people can be referred between tiers as a step-up or step-down.

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[3] ibid

9. REASONS FOR RECOMMENDATIONS

9.1 Obesity requires a systematic approach with all stakeholders working together. This approach is being recommended in order to ensure that Barnet has a response to obesity in place which covers all aspects of weight management which are relevant to our population and has a strong focus on prevention – both in terms of services and an environmental approach in addition to dealing with the current issues.

10. ALTERNATIVE OPTIONS CONSIDERED AND NOT RECOMMENDED

10.1 An alternative approach is to do nothing about obesity in Barnet. This is not recommended since the health and social care costs of obesity are significant and will impact on council budgets as well as those of key partners.

11. POST DECISION IMPLEMENTATION

11.1 Convene an Obesity strategy group with aim of developing an action plan for approval supported by an adult pathway sub group and the existing childrens pathway subgroup.

11.2 Work on the built environment and planning to continue.

11.3 If approved, the commissioning of the Adult Tier 2 service will be commissioned in late spring 2015.

11.4 Children’s Tier 2 weight management service will commence April 2015.

12. IMPLICATIONS OF DECISION

12.1 Corporate Priorities and Performance

12.1.1 The Barnet Health and Wellbeing Strategy recognises the problems of obesity and outlines commitments to reduce rates in Barnet and to improve matters through supporting the most disadvantaged groups.

12.1.2 Adult excess weight (overweight and obesity) is identified as an indicator for the Public Health Outcomes Framework 2013-16 for England.

12.1.3 The Barnet Sports and Physical Activity Strategy recognises the contribution of physical activity in reducing obesity and it aims to increase physical activity of residents of all ages by providing the facilities, open spaces, and community and transport infrastructure.

12.2 Resources (Finance & Value for Money, Procurement, Staffing, IT, Property, Sustainability)

12.2.1 The approval of the approach will have no direct resource implications with exception of Adult Tier 2 weight management service. The Public Health ring-fenced grant will be used to fund this service.

12.2.2 It is critical that a variety of staff and wider strategic partners are involved and contribute to the process as part of their daily business.

12.3 **Legal and Constitutional References**

12.3.1 The responsibility for public health transferred to local authorities in April 2013 under the reforms set out in the Health and Social Care Act 2012. Health and Wellbeing Boards are given statutory effects by s194 of this Act.

12.3.2 The Council's Constitution sets out the Terms of Reference for the Health and Well-Being Board. The responsibilities include:

- To jointly assess the health and social care needs of the population with NHS commissioners, and apply the findings of a Barnet joint strategic needs assessment (JSNA) to all relevant strategies and policies.
- To agree a Health and Well-Being Strategy for Barnet taking into account the findings of the JSNA and performance managing its implementation to ensure that improved outcomes are being delivered.
- To work together to ensure the best fit between available resources to meet the health and social care needs of the population of Barnet (including children), by both improving services for health and social care and helping people to move as close as possible to a state of complete physical, mental and social well-being. Specific resources to be overseen include money for social care being allocated through the NHS; dedicated public health budgets; and Section 75 partnership agreements between the NHS and the Council.

12.4 **Risk Management**

12.4.1 There is a risk that without a shared and systematic approach to obesity across the Borough obesity will continue to become burden to individuals and families and to the health and social care system.

12.5 **Equalities and Diversity**

12.5.1 The 2010 Equality Act outlines the provisions of the Public Sector Equalities Duty which requires Public Bodies to have due regard to the need to:

- eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Equality Act 2010
- advance equality of opportunity between people from different groups
- foster good relations between people from different groups

12.5.2 Having a system-wide approach to obesity will have a positive effect on those who are identified as overweight and obese in the Borough and also those who are 'at risk' of developing obesity or its complications and should be considered as priorities for targeting preventive initiatives. These include the following:

- Children from low-income families (there is a correlation between low income and a greater risk of obesity in childhood as well as adulthood)
- Children from families where at least one parent is obese (the increased risk may be due to genetic and/or environmental reasons)
- Individuals of Asian origin, particularly those of South Asian origin, for whom obesity carries a greater risk of metabolic syndrome and its consequences.
- Ethnic groups with a higher than average prevalence of obesity.
- Adults in semi-routine and routine occupations (using the National Statistics Socio-Economic Classification [NS-SEC])
- People who have a physical disability, particularly in terms of mobility, which makes exercise difficult.
- People with learning difficulties.
- Older people (increasing age is associated with increasing prevalence of obesity up to the age of 64 years, and then a decline in the prevalence begins)

12.6 **Consultation and Engagement**

12.6.1 Stakeholder event held in June 2014 with a broad cross section of organisations plus individuals who would be likely to use and refer to services. Members of the public were also present and the feedback and views were collected during the event. There was support for working towards a co-ordinated response. Further engagement of stakeholders and partners who constitute part of the action plan.

13. BACKGROUND PAPERS

13.1 Public Health Outcomes Framework (2012); http://www.phoutcomes.info/

13.2 Foresight Report: Tackling obesities: future choices. Government Office for Science and Department of Health (2007); https://www.gov.uk/government/publications/reducing-obesity-future-choices

13.3 Strategic Review of health inequalities. Institute of Health Equity (2010); http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review

13.4 Active People Survey. Sport England (2012). http://archive.sportengland.org/research/active_people_survey/active_people_survey_7.aspx

13.5 Obesity: identification, assessment and management of overweight and obesity in children, young people and adults. NICE guideline CG189 (2014); http://www.nice.org.uk/guidance/CG189

13.6 Healthy Weight, Healthy Lives: A toolkit for developing local strategies – Estimating the local cost of obesity. Faculty of Public Health (2013); http://www.fph.org.uk/healthy_weight,_healthy_lives%3A_a_toolkit_for_developing_local_strategies%20

13.7 Planning Healthy-Weight Environments. Ross and Chang. (2014).
http://www.tcpa.org.uk/pages/planning-out-obesity-2014.html