

Doncaster Local Delivery Pilot Behavioural Insight Work

Phase 3 Co-Design Workshops

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BEHAVIOURAL SCIENCE
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1. Executive Summary

This report provides an overview of the methodology, analysis, and findings of Phase 3 of this project. The aim was to co-design interventions to increase physical activity within three Doncaster communities and make recommendations about what interventions might be successful to inform future Local Delivery Pilot work. Workshops were held in three local community organisations with members of their community. The workshops were based on the Double-Diamond co-design process model with the COM-B model. They were designed to Discover, Define, Develop and Deliver community-driven suggestions about how to increase physical activity, with these solutions targeting people's Capabilities, Opportunities, and Motivation to participate in physical activity.

Two three-hour workshops were conducted in each community. The data were analysed using a framework analysis approach, with the COM-B model as the underpinning framework. The findings provide a range of potential suggestions about how to increase physical activity that meet the needs of the communities.

The key recommendations are:

The way in which we promote physical activity is important. Messages need to:

- Promote the range of activities that are categorised as physical activity, including non-typical and novel activities.
- Emphasise the range of benefits of physical activity, rather than focusing solely on weight management.
- Messages need to come from the community and reflect people who are like them, either in terms of a health condition or other circumstance.
- The format of messages is important and should include a range of delivery methods, such as pictures and videos, rather than focusing mainly on text-based leaflets or brochures. This will help address negative stereotypes and increase individuals' knowledge about what physical activity means and its benefits (psychological capability).
- Provide opportunities to try a wide range of different activities, including activities that are not generally viewed as a form of typical exercise or structured sport.
- Opportunities should be sensitive to individuals' health limitations or other circumstances. This will help individuals find an activity they enjoy and increase their confidence and skills in physical activity.
- Developing good routines and habits are important in order to support engagement and maintenance of physical activity. Use tools that are already being used in the community, such as Fitbits or text messaging.

- Encourage activities to be incorporated into existing community initiatives and use existing community physical spaces as a place to set up regular opportunities for physical activity.
- Encouraging regular periods of physical activity as a part of their everyday routine will help increase individuals' confidence in their ability to be physically active.
- Integrating physical activity into existing community groups or initiatives and providing opportunities to be active for groups of similar people may help tap into existing sources of social support. This may help increase enjoyment and confidence to participate in activity.
- Small changes to physical spaces and green parks may help advocate those places as areas for physical activity.

2. Introduction

Since October 2018 the Behavioural Science Consortium has been working with Doncaster Metropolitan Borough Council (DMBC) to explore levels of physical inactivity within a number of Doncaster communities. This project is part of the Doncaster Local Delivery Pilot (LDP) with Sport England. The aim of the LDP is to explore how low participation in physical activity and high levels of physical inactivity can be addressed in a place-based way with a clear focus on delivering sustainable behaviour change for individuals.

The project between the Behavioural Science Consortium and DMBC consists of three phases:

- **Phase 1** - Quantitative survey across a range of communities in Doncaster
- **Phase 2** - Community-led qualitative interview research within targeted communities
- **Phase 3** - Community based co-design work to develop interventions

Phase 1 of the project involved 1,120 households across eight different Doncaster communities who completed a survey to assess current levels of physical activity. The results showed that levels of inactivity were high within these communities and as people's capabilities, opportunities, and motivations to be active increased, so did a person's physical activity¹. Barriers and facilitators to physical activity differed between the eight communities, highlighting the need for further community focused research to understand better the challenges and opportunities faced by specific communities.

Phase 2 of the project involved Community Explorers recruited from local organisations in three different communities who conducted 76 interviews with members of their community. The results provided in-depth findings into differences in perceptions of capabilities, opportunities and motivations for physical activity between those who did and did not self-define as being physically active. Consistent with Phase 1, there were key differences in barriers and facilitators to physical activity between the communities, emphasising the need to explore physical activity interventions with each community individually and involve community members in the design process to ensure available assets to increase activity are incorporated within potential solutions.

¹ Please visit our website for a full overview of the results of Phase 1 and 2 - www.behaviouralscienceconsortium.org.uk

2.1 Our approach

We have used the UK Design Council's 4-stage Double Diamond process model with the COM-B model for this work. This provided a structure for the workshops and guided us from exploring insights, to identifying and prioritising solutions (Figure 1). Using a range of different activities to engage participants creatively in the design process, the workshops encouraged participants to discuss and prioritise insights gathered to date (and generate new insights) (*Discover*); summarise challenges and generate ideas and solutions (*Define*) and; prioritise ideas and refine solutions (*Design*) in order to make recommendations about what interventions might be successful to inform future Local Delivery Pilot work (*Deliver*).

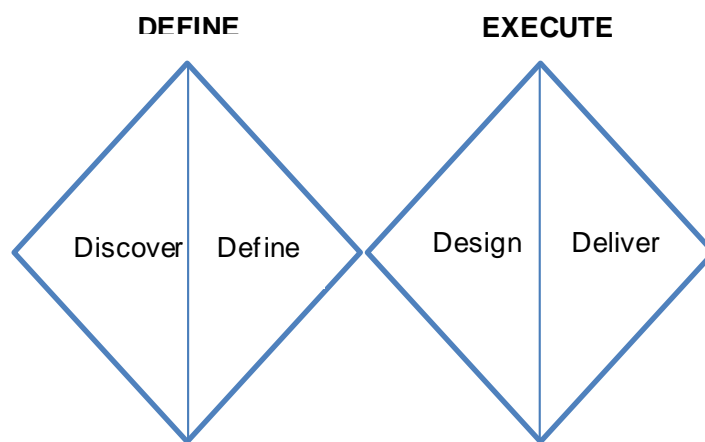


Figure 1. Double Diamond co-design process model

We combined the COM-B model (Michie et al., 2011) with the Double Diamond process model because in order for physical activity to occur, a person must have the *Capability* (personal assets including physical skills, knowledge, and psychological resources), *Opportunity* (social and environmental assets), and *Motivation* (beliefs, attitudes and habits) to do so (Figure 2). Thus, co-designed recommendations and solutions to increase physical activity must consider and address barriers and facilitators across these domains. The combined Double Diamond and COM-B model were used throughout this project.

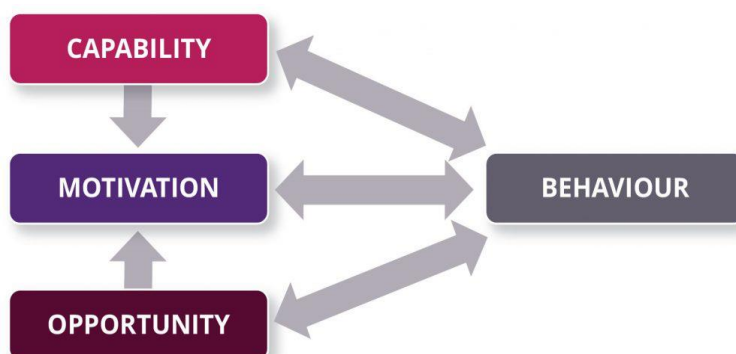


Figure 2. The COM-B model (Michie et al., 2011)

2.2 Aims of Phase 3

The key aims and objectives of Phase 3 insight were:

- To undertake two co-design workshops in three different communities with members of the community.
- To develop suggestions about how to increase physical activity through co-design that meet the needs of the communities.
- To develop suggestions that target and address people's Capabilities, Opportunities and Motivations (COM) to engage in physical activity.
- To make recommendations about what interventions might be successful to inform future Local Delivery Pilot work.

3. Methodology

Throughout this programme of work, we have focused on building capacity among local communities in order to foster and maintain strong relationships between DMBC and local community organisations. The Phase 3 methodology was designed to maintain and facilitate this agreed objective with DMBC. We undertook workshops with community members to co-design and co-produce the interventions and used the findings from the survey (Phase 1) and insights work (Phase 2) to guide discussion and idea generation. This method encouraged community members to lead and take responsibility for the activities and to build ownership of the ideas and future direction of the project.

3.1 Ethics

Full ethical approval for the research was gained from the Sheffield Hallam University Research Ethics Committee.

3.2 Recruitment

Target communities

Phase 2 focused on three communities in Doncaster. These three communities were chosen for the Phase 3 work to ensure that the solutions developed to increase physical activity targeted the community-specific barriers and facilitators identified in the earlier insights work. The three communities were:

- Balby
- Edlington
- Intake

Organisations

DMBC facilitated the recruitment of participants for the co-design workshops from community organisations in Doncaster who had already participated in the Phase 2 work. DMBC recruited a combination of Community Explorers (members of the community who undertook qualitative interviews with people from their community), members of the local organisations and, members from the wider community. The aim of this approach was to facilitate the transition between the co-design workshop and future planned action and delivery stages, as well as promote the continued sustainability and long-term partnership between DMBC and the local community organisations. The organisations were:

- Balby - Exemplar Health Care (<https://www.exemplarhc.com/our-homes/home/quarryfields/>)
- Edlington - Edlington Community Organisation (<https://edlingtoncommunityorganisation.wordpress.com/>)

- Edlington Hilltop Centre (<http://www.hilltopcentre.org.uk/>)
- Intake - People Focused Group (<https://peoplefocused.org.uk/>)

Participant recruitment

Members of these local organisations and members of the wider community were invited to participate in the co-design workshops. It did not matter if participants were active or not, whether they were interested in physical activity, or whether they had participated in the previous insight work. The key priority was to recruit people who were involved in their local communities and were interested in driving forward potential community-grounded initiatives. The community organisations were offered a nominal financial incentive for their participation.

Procedure

The workshops were led by three members of the South Yorkshire Collaboration for Leadership in Applied Health Research and Care (CLAHRC) Translating Knowledge to Action (TK2A) team, in collaboration with the immediate research team. The TK2A team are experts on the processes of co-design in the context of physical activity. The workshops were supported by members of the immediate research team to provide behavioural science expertise about the range of different interventions and the ways in which they might work, whilst ensuring that the solutions arrived at reflected and incorporated the earlier insight work and the views, thoughts and ideas of the community.

We conducted two three-hour workshops in each of the three communities. The workshops were held at the organisation premises. DMBC negotiated convenient times with the community members to ensure that a wide range of stakeholders were able to attend (e.g. those at work or with caring responsibilities). There was a two-week window between Session 1 and Session 2 of the workshops to enable the research team to consider any issues arising from the first session and to ensure that they were fed appropriately into Session 2. We encouraged participants to attend both sessions.

Before the co-design workshops began, participants were provided with an information sheet to read and all participants had the opportunity to discuss their participation in the workshop and ask any questions. Before participating in the workshop, all participants were required to sign a consent form.

Participants were asked to complete a variety of tasks and activities, both in small groups and as a whole group. We collected data by taking photographs of the completed tasks and the research team collected field notes during the workshop. This allowed the research team to record the workshop in an unobtrusive manner. Consent to take photographs was obtained from all workshop participants.

3.3 Workshop structure and activities

The content for each co-design workshop utilised and explored the findings from the Phase 2 insights work. The events were structured to engage participants creatively in the design of solutions and included a range of activities designed to foster collaboration, discussion and sharing of ideas. Content for Session 2 of the workshops was developed after completion of the Session 1 workshops to ensure that the emergent insights were incorporated and addressed within the workshops. An overview of the workshop activities and how they related to the Double Diamond co-design process model is provided in Table 1. A more detailed summary of the workshop activities is provided in the following sections.

Table 1. Overview of the structure of the workshops

Workshop	Double Diamond Phase	Objectives	Activities
1	Discover	Introductions and familiarisation with each other, and the processes and principles of co-design. Discussing and prioritising insights gathered to date (and generate new insights) (in relation to COM-B)	Taboo card game Card sorting exercise Creating personas
1	Define	Generating ideas and solutions (in relation to targeting COM)	Storyboards Community asset mapping
2	Develop	Continuing to generate or refine ideas. Voting and clustering exercises to select ideas that meet core principles of desirable, feasible, viable.	Creative game Card sorting exercise Solution mapping

Workshop 1

The overall aim of Workshop 1 was to discuss and prioritise insights gathered to date (and generate new insights) (Discover) and begin generating potential ideas and solutions (Define). An important finding from the Phase 2 insight work was that perceptions about what it *means* to be physically active varied between those who did and those who did not self-define as being physically active. Inactive participants drew upon stereotypes that present physically active people as those who engage in 'structured' and 'typical' sports (e.g. running, cycling) whilst active participants tended to view physical activity as simply 'moving more'. The insight work also

identified the existence of personal, social and environmental assets that can help support people's engagement in physical activity.

Therefore, the objectives of Workshop 1 were:

- To explore what form(s) of non-structured physical activity might be engaging
- To explore personal, social and environmental assets in people's lives to make them move more

Workshop 1 involved five activities.

- 1. *Taboo game*** In pairs, people took part in a game of Taboo. Each player had to have their partner guess the word on their card without using the word itself or five additional words listed on the card. The aim of this warm-up activity was to show how people can have different ideas, perceptions, experiences and beliefs about the same thing (such as views about physical activity).
- 2. *Card sorting*** People were given a pack of cards listing different types of physical activity. These cards ranged from traditional forms of physical activity (e.g. football, running) to more non-traditional forms of physical activity (e.g. gardening, ironing). The cards also varied by group activity (e.g. cricket) to more individual-based activities (e.g. weights). In small groups, people were asked to decide whether each activity was traditional/typical or non-traditional/typical activity, and whether it was a group or individual-based activity. Blank cards were also provided so people could record types of physical activity that they felt were missing from the card pack. The aim of this activity was to get people thinking more widely about the range of activities that count as being 'physically active' and to encourage people to think about physical activity as something more than 'structured' exercise. In terms of COM-B, this activity was also designed to increase people's psychological capability, that is, increase people's knowledge and understanding of what physical activity can mean so that this could be drawn upon in subsequent tasks.
- 3. *Personas*** In small groups, people were asked to create a persona (or a character) based on people in their community. People were given basic information about the persona; these characteristics were based on the insight work (the development of the personas is available in Appendix 1). Each character varied in terms of their Capability, Opportunity and Motivation to be physically active. An example of one of the six personas is available in Appendix 2. People were asked to expand and elaborate on the personas barriers and facilitators to being physically active (in terms of COM) and then to feedback their personas to the wider group. We used character traits based on the insight work (rather than individuals in the workshops themselves) in order to encourage people to think more widely about the barriers and facilitators to physical activity (and potential solutions) for the community as a whole, so that solutions might be

suitable for the whole community, rather than focusing on ideas that may only be applicable to themselves.

- 4. *Storyboard*** People were provided with a blank storyboard. They were asked to map out key assets (personal, social and environmental) that could increase their characters level of physical activity and make them move more in their day to day lives.
- 5. *Mapping assets*** We provided people with large maps of their community area (Appendix 3 - 5). People were asked to familiarise themselves with the map and identify key opportunities or assets that might be of interest to their persona or community (e.g. greenspaces, parks, gyms, cycle routes). They were then asked to map out their persona's storyboard on the map. These tasks included exploring how people had the capability and motivation to engage with those opportunities and identifying ways of overcoming possible barriers.

Members of staff, volunteers and users of the People Focused Group attended the workshop in Intake, with volunteers and residents of Exemplar Health Care home attending the workshop in Balby. A detailed description of these groups is available in the Findings Section (Section 4). There were large numbers of people with learning difficulties who found it difficult to do these tasks, despite there being evidence of the effectiveness of these tasks in other co-design workshops. We therefore reflected upon the process and outcomes of Workshop 1 prior to developing the activities for Workshop 2. In addition to many people finding it difficult to engage with the activities due to learning difficulties, we also found that many people were focusing on physical assets and 'structured activities' available in their community, rather than focusing on personal and social assets that were found to be key drivers of being active in the earlier insight work. We also found that the personas were not generally successful, primarily because of their hypothetical nature. Some people in the workshops felt that the personas did not represent members of their community. Based on these reflections, we developed a different set of tasks and activities to help workshop participants consider potential ideas and solutions that might address issues of capability, opportunity and motivation to engage in activity.

Workshop 2

The overall aim of Workshop 2 was to continue generating and refining ideas (Develop) in order for the research team to refine those potential ideas and make recommendations about what interventions might be successful to inform future Local Delivery Pilot work. The objectives of Workshop 2 were:

- To explore potential ideas and solutions that might address barriers and facilitators to engaging in physical activity (in terms of COM)
- To identify key personal, social and environmental assets that are available to support engagement in physical activity
- To refine potential ideas for implementing the recommendations in their community

Workshop 2 involved three activities.

- 1. Warm-up activity** Following a re-cap of the last workshop, people were asked to complete a short warm-up activity. In small groups, people were given an object (e.g. a small traffic cone, a beach racket) and asked to think of ways that they could use the object. The aim of this activity was to encourage creative thinking.
- 2. Card sorting** In small groups, people were given a pack of cards listing different ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity. These ideas were directly drawn from the insight work. Some examples include: 'I have the opportunity to try different activities within my own community'; 'There is a buddy system where myself and a friend can try different types of physical activity together'; 'I receive information which describes people with similar health conditions to me and how they keep physically active'; and 'Our local authority has installed lighting and surveillance cameras in our parks and green spaces'. Ideas from each of the three communities were presented at each individual community. People were asked to decide whether they liked, disliked or were unsure about each of the ideas. We also provided blank cards so people could record potential ideas that they felt were missing from the card pack. The aim of this activity was to get people thinking about a range of different ideas and solutions, that included those that addressed capability, opportunity and motivation that could help increase physical activity, rather than create an explicit tally of likes or dislikes.
- 3. Refining ideas and developing implementation plans** People were then asked to explore and expand on two or three key ideas that were liked by the entire group. These ideas were discussed in small groups and then fed back to the entire workshop. We encouraged people to map out and refine the ideas on large sheets of paper and to develop plans about how those ideas could be implemented in their community.

3.4 Data analysis

Workshop data were analysed using the principles of COM-B framework analysis (Ritchie and Spencer, 1994). Workshop photographs and field notes were analysed by the research team which included qualitative analysts. Coding involved a top-down approach focusing on participants ideas and solutions about how to increase physical activity in their community in terms of addressing people's Capabilities, Opportunities and Motivations to be active. Once key themes had been developed, these were discussed with members of DMBC during a briefing session.

4. Findings

Findings for Balby, Edlington and Intake are presented in the following section. Anonymised photographs of the workshop tasks and activities are included to illustrate the findings.

4.1 Participants

Two workshops were carried out at the premises of three voluntary organisations, located across the three target communities. Each workshop lasted between two hours and 30 minutes, to three hours. The number of community members who attended each workshop by community is presented in Table 2.

Table 2. The number of community members who attended each workshop, by community

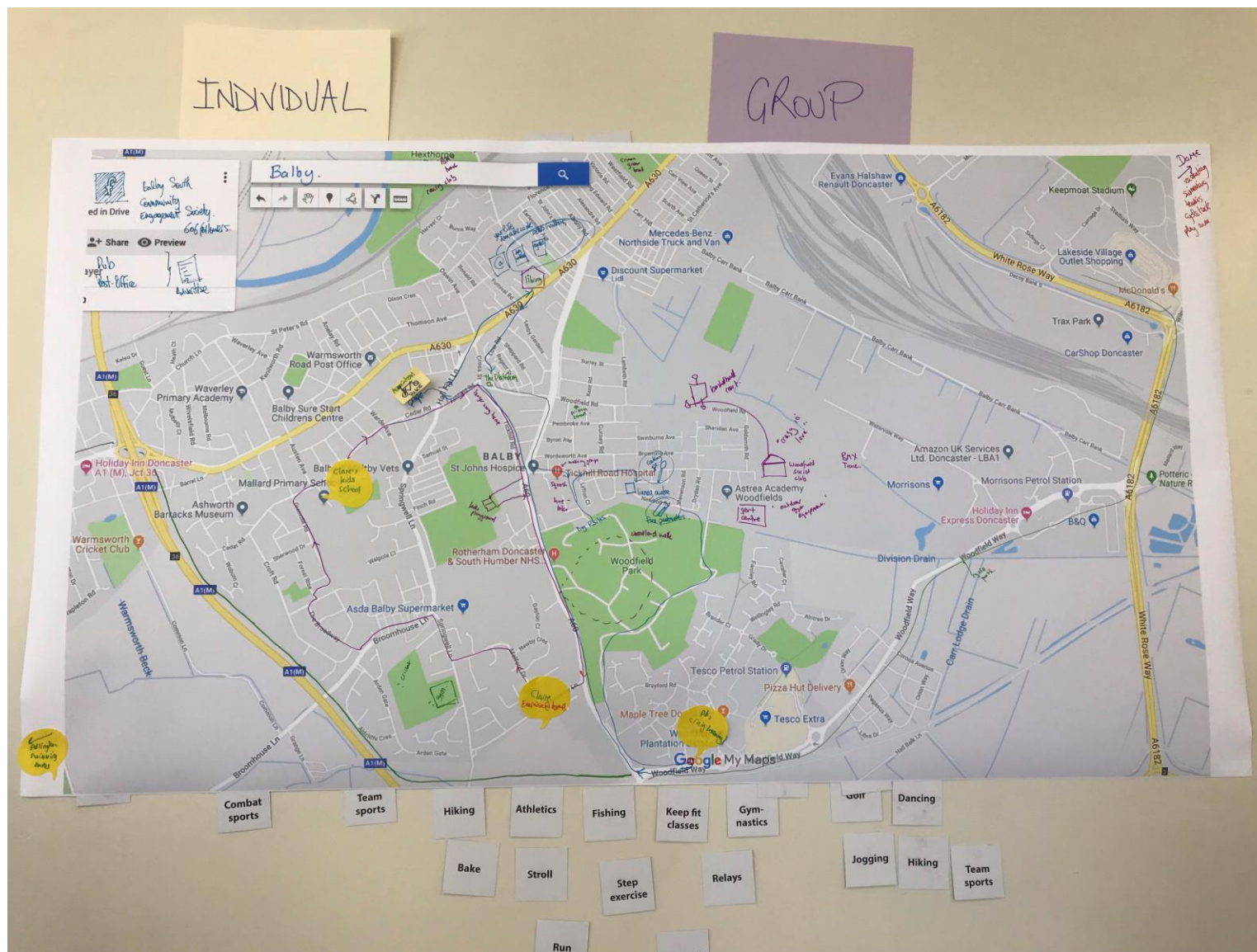
Community	Workshop 1	Workshop 2
Intake	21 people	18 people
	Doncaster Council	Doncaster council
	Members of staff, volunteers and users of the People Focused Group	Members of staff, volunteers and users of the People Focused Group Members of staff from local businesses (e.g. local gym)
Balby	11 people	18 people
	Doncaster Council, including community well-being officers	Doncaster Council, including community well-being officers
	Volunteers of community engagement organisations	Volunteers of community engagement organisations
	Volunteers and residents of Exemplar Health Care home	Volunteers and residents of Exemplar Health Care home
Edlington	3 people	8 people
	Doncaster Council	Doncaster Council
	Members of staff and volunteers from Edlington Hilltop Centre	Members of staff and volunteers from Edlington Hilltop Centre Members of staff and volunteers from Edlington Community Organisation

storyboards is provided in Table 3. Participants also mapped out each storyboard onto a large map of Balby (Figure 4) to explore their persona's home address; walking routes; local parks and green spaces and; local social clubs.

Table 3. Exploring assets to make their persona move more in Balby

Researcher-generated persona barriers and facilitators to physical activity (in relation to COM)	Participant-generated ideas to make their persona move more
<p>Clare</p> <p>Capability Claire has previously been active, so knows what to do. She has gained weight since having children, and finds she gets out of breath quicker.</p> <p>Opportunity Clare has limited time to be active, due to having three children that require care. Her husband works away during the week and she has no immediate family nearby for support.</p> <p>Motivation Clare's priority is for her to care for her children and to have a routine to ensure her children attend the right classes etc. Clare is too tired at the end of the day to be active</p>	<p>Before her children get out of bed, Clare could do some form of exercise at home (e.g. at the sink, on stairs; using a chair) while listening to the radio or TV.</p> <p>Instead of taking the car or public transport, Clare could walk her children to school.</p> <p>Clare could meet up with other mums at the school and use this time to arrange an activity with them. Clare could take a longer walk home.</p> <p>In the middle of the day, Clare could go for a 1-mile walk (A woodland walk in Woodfield park).</p> <p>After picking up the children from school, Clare could take her children to the playground.</p> <p>On a Saturday morning, Clare could take her children to the Dome (local leisure centre).</p> <p>Clare could arrange a babysitter/kid-swap and go to a dance class at Woodfield Social Club with her friends/other school mums.</p>
<p>Craig</p> <p>Capability Craig can participate in sports and he has been active all his life. Craig's mental health can limit their participation in activities if having a 'bad day'.</p> <p>Opportunity Craig has the time to be active, and he is happy to travel to other areas to be active and use other green spaces, including the countryside. Craig is happy to be active on their own, and he doesn't want to be held back by others.</p> <p>Motivation Craig is motivated to be active to improve his health and manage his mental health. Craig wants to keep fit and keep pushing themselves in the sports that they do.</p>	<p>Craig could volunteer at Rovers Bike Library (an official Yorkshire Bank Bike Library which allows the public to hire bikes and equipment free of charge) and make like-minded friends.</p> <p>Craig could access the local library 'seed fund' and set up a dog walking group.</p> <p>Craig could create a group on 'Your Life Doncaster'. This could be a cycling or walking group with like-minded people.</p>

Figure 4. Mapping assets in Balby



Workshop 2: Prioritising ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity in Balby

In the second phase of the Workshops, participants were given a pack of cards listing different ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity and asked to decide whether they liked, disliked, or were unsure about each of the ideas. The majority of the solutions were found to be liked and acceptable. This activity is illustrated in Figure 5.

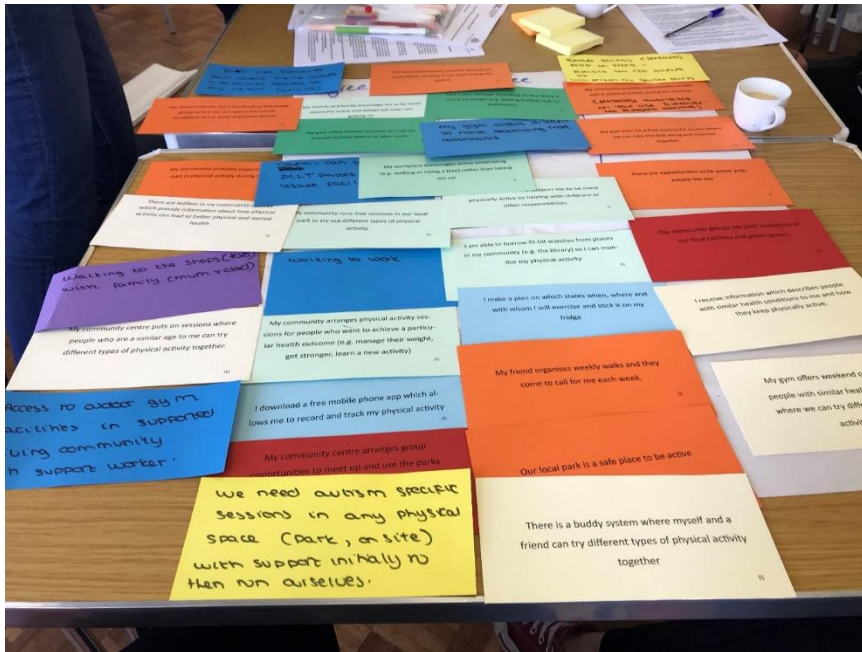


Figure 5. Prioritising ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity in Balby

Participants were given blank cards so they could record other ideas that they felt were missing from the card pack. The new ideas and solutions were:

- To have autism-specific (or health-condition specific) sessions (in any physical space) with support from carers in the first instance so members can learn the skills to run the groups themselves;
- To organise a walking group in the community;
- To have opportunities to do physical activities (for all ages) such as: community dog walking; family rounders; walking soccer; nature walks; kite flying; crazy golf; bowls; face painting; juggling; skipping; making healthy picnics; street Olympics;
- To involve neighbours to try different street activities (e.g. Kerby; 5-a-side; walking; rounders);
- To develop a novel physical activity initiative such as 'Beat the street' (a Barnsley initiative);
- To encourage walking or taking the bike to work;
- The local gym could offer discounts to make exercising more affordable;

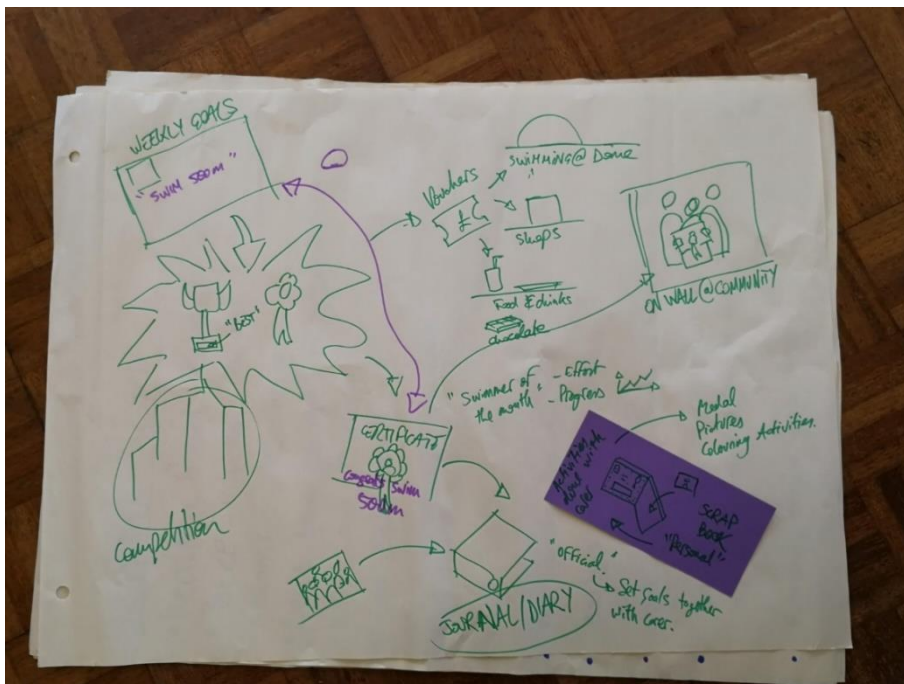
- To improve access to outdoor gym facilities in supported living communities with a support worker;
- Improve the use of 'Your Life Doncaster' (a website), which could direct people to groups and activities specific to an individual's needs;
- To encourage people to walk to the shops (e.g. Tesco) with family (e.g. mum and dad);
- Doncaster Council could provide free Doncaster Culture and Leisure Trust (DCLT) passes for local leisure facilities;
- To adapt the use of 'Better points', a Doncaster mobile app where you win prizes as you gather points, which could be used to encourage people to do physical activity.

Workshop 2: Refining ideas in Balby

Participants expanded and refined their ideas about how to increase physical activity in Balby. This next section provides an overview of these community-driven solutions.

Solution one: Increasing physical activity in people with a health condition in Balby

Support carers and residents of Exemplar Health Care discussed how mental health conditions and learning difficulties could be a barrier for engaging in physical activity and so health needs to be a consideration when being or planning to be physically active. In particular, the need to have support from carers and other people with



similar health conditions was viewed as being very important.

This group explored how they could increase physical activity in people with a mental health condition or learning difficulty.

Figure 6. Developing ideas about how to increase physical activity in people with a health condition in Balby

They discussed how it is important to have support and felt they would like the opportunity to try different physical activities with their carers and people with similar health conditions to them. They felt that goal setting activities could be helpful, such as setting a personal weekly target or goal on their community board (e.g. 'to swim 500 metres'). People could get a certificate if they achieved their goal, which they could place in a personal diary or journal, or on their community wall. Other rewards could be vouchers for treats or other activities.

Solution two: Developing habits and routines for physical activity in Balby

Support carers and residents of Exemplar Health Care discussed how 'The Platform' is a new pop-up venture in Balby, developed and staffed entirely by service users from Exemplar Health Care. The Platform holds a series of pop-up shops, providing education, employment and training to individuals with learning disabilities and mental health conditions. Participants discussed how they could use 'The Platform' as a meeting point to arrange 'sponsored one-off' walks or a regular weekly walk

with people who have similar health conditions and their carers (Figure 7).



Figure 7. Developing ideas about how to create routines and habits to be active in Balby

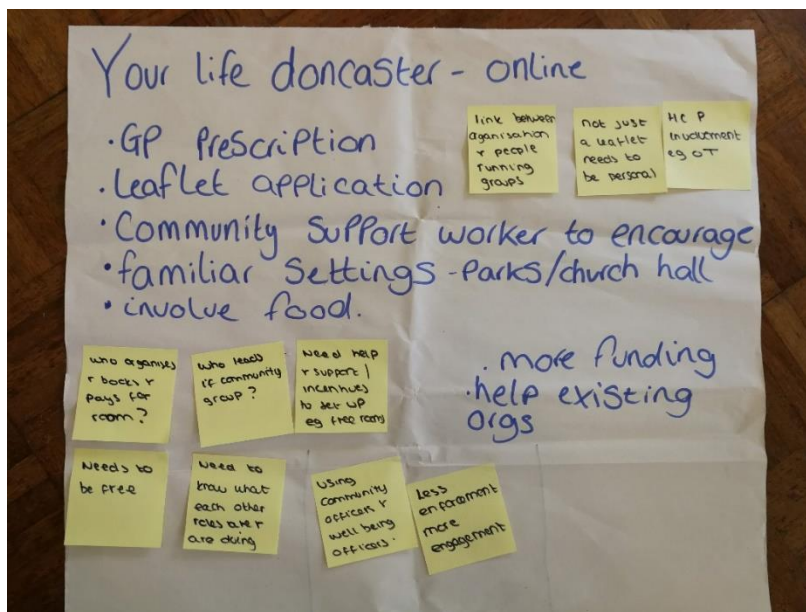
Solution three: Incorporating physical activity into existing community groups in Balby

Participants from Doncaster Council (including Community Well-being officers), members of voluntary community engagement organisations and volunteers of Exemplar Health Care home in Balby discussed the need to incorporate physical activity into existing activities that are already happening in the community. The group felt that it was important to build upon existing groups that have already brought people together who are like them, either in terms of a health condition or other circumstance. This is because for many people, social support is an important source of encouragement and enjoyment in activity. They felt that the group should

take the lead and decide on ways to incorporate physical activity within their existing community group, that are sensitive to the individual's health capabilities. For example, there are existing opportunities in Balby, such as 'tea in the park', that could incorporate activity as part of their established group in a familiar and local setting.

Solution four: Establishing novel ways to be physically active in Balby

Participants from Doncaster Council (including Community Well-being officers), members of voluntary community engagement organisations and volunteers of Exemplar Health Care home in Balby discussed a number of novel ways to be



physically active. They discussed how the mobile phone game 'Pokémon Go' was a successful way of increasing physical activity in a non-traditional way. Other suggestions included: walking bingo; find the object (like 'Find the Elephant' in Sheffield) and; 'Beat the Street' (currently being run in various locations in the UK) (Figure 8).

Figure 8. Developing novel way to be physically active in Balby

Solution five: Exploring ways of communicating about physical activity in Balby

Participants from Doncaster Council (including Community Well-being officers), members of voluntary community engagement organisations and volunteers of Exemplar Health Health Care home in Balby explored ways of communicating messages about physical activity (Figure 9).

Participants did not think leaflets or brochures communicating messages about physical activity were useful because they were not personal or tailored to the community and their needs. They were also unsuitable for all community members, especially for individuals with learning difficulties.

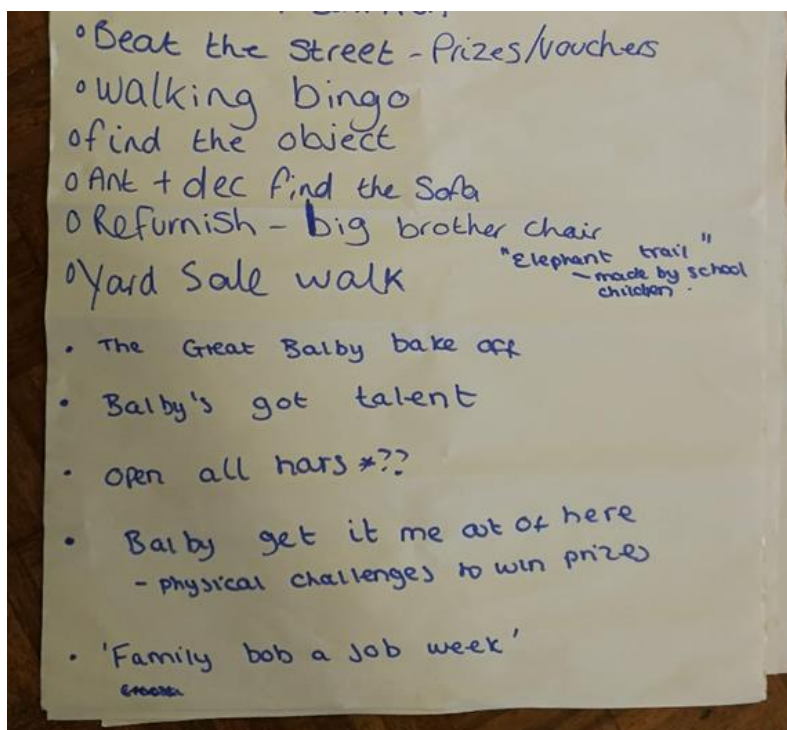


Figure 9. Exploring ways of communicating about physical activity in Balby

Participants felt that messages about physical activity should come from the community and 'people like them'. The group discussed using Your Life Doncaster (<https://www.yourlifedoncaster.co.uk>) to advertise physical activity initiatives. However, participants felt that the website is not widely used. The group discussed how there is a local voluntary community organisation (e.g. Balby South Community Engagement Society) that advertises local community events on their website (www.balbysouthcommunity.com), Facebook group and local newsletter. The group felt it would be possible to communicate messages about physical activity and associated events via this organisation.

Some participants felt that messages about physical activity should come from their GP in the form of an exercise prescription. However, participants felt that a one-off consultation with a healthcare professional would be insufficient to sustain changes in physical activity. For this community group, people need social support to feel empowered to participate in physical activity.

Community well-being officers discussed how they could be involved in communicating physical activity messages. They could meet people in the community and help support and enable people to engage in physical activity. They discussed how they already do very similar work and have strong links with specific community groups in Balby. The group discussed how there needs to be a good communication plan between community well-being officers and existing community groups to ensure that everyone would be happy with this solution.

4.3 Key recommendations for Balby

Based on the data from Balby the following community-driven recommendations can be made in relation to how they address an individual's capability, opportunity and motivation to be physically active:

- Providing opportunities to be physically active within an individual's health limitations can help ensure all community members can engage in physical activity. This can help address capability barriers raised by community members.
- Providing 'novel' opportunities to be physically active, rather than focusing solely on traditional forms of structured exercise, could help people find an activity they enjoy and increase their motivation to engage in physical activity, as well as increase their confidence in their skills. Providing communities with the opportunities to try different novel activities could also help overcome capability barriers, as it would help encourage people to find a form of activity that works best for them within their own health limitations.
- Encouraging the development of personal targets, goals and rewards may help increase motivation and enjoyment to take part in physical activity.
- Incorporating physical activity within existing community-based assets, such as existing community initiatives (e.g. tea in the park), may be effective in promoting physical activity by drawing upon existing sources of social support from community members.
- Developing physical activity routines and habits is important in order to motivate people to be active and maintain those changes. Incorporating existing community-based assets (such as 'The Platform') as part of physical activity initiatives may be the first step in encouraging the development of regular routines.
- Enjoyment is a key motivator for physical activity and encouraging people to lead on and try different activities could encourage physical activity and encourage people to take ownership of community-led initiatives.
- Messages about physical community need to come from the community. Careful consideration needs to be made for the format of the messages, as standard leaflets and brochures are unlikely to be read or may be unsuitable for those with learning difficulties.
- Using existing community assets, such as community wellbeing officers, to communicate messages about physical activity and provide support should be explored as one possible way of promoting physical activity messages and supporting people to increase their activity.

4.4 Results for Edlington

In total two members of the community from Edlington Hilltop (staff and volunteers) and 1 member of Doncaster Council participated in the first Workshop and eight members of the community from Edlington Hilltop, Edlington Community Organisation (staff and volunteers) and Doncaster Council participated in the second Workshop. Edlington Hilltop Centre is a sustainable project in the heart of the community which delivers a wide range of educational, training and skills development for all members of the community. Edlington Community Organisation is a community charity working to improve and regenerate Edlington and its surrounding areas to make it a better place to live for all generations. The charity is based on community involvement and partnership, working alongside various local organisations.

Workshop 1: Mapping different types of physical activity in Edlington

Workshop participants mapped out different types of physical activity into (i) traditional vs. non-traditional activity and; (ii) group or individual-based activity (Figure 10). The group were encouraged to create new physical activity cards. They felt that 'walking' and other forms of 'typical' exercise were not engaging. They felt it was important to incorporate an engaging activity with 'moving more'. Suggestions included 'exciting walks' (for example, a new scenic route or wildlife watching).

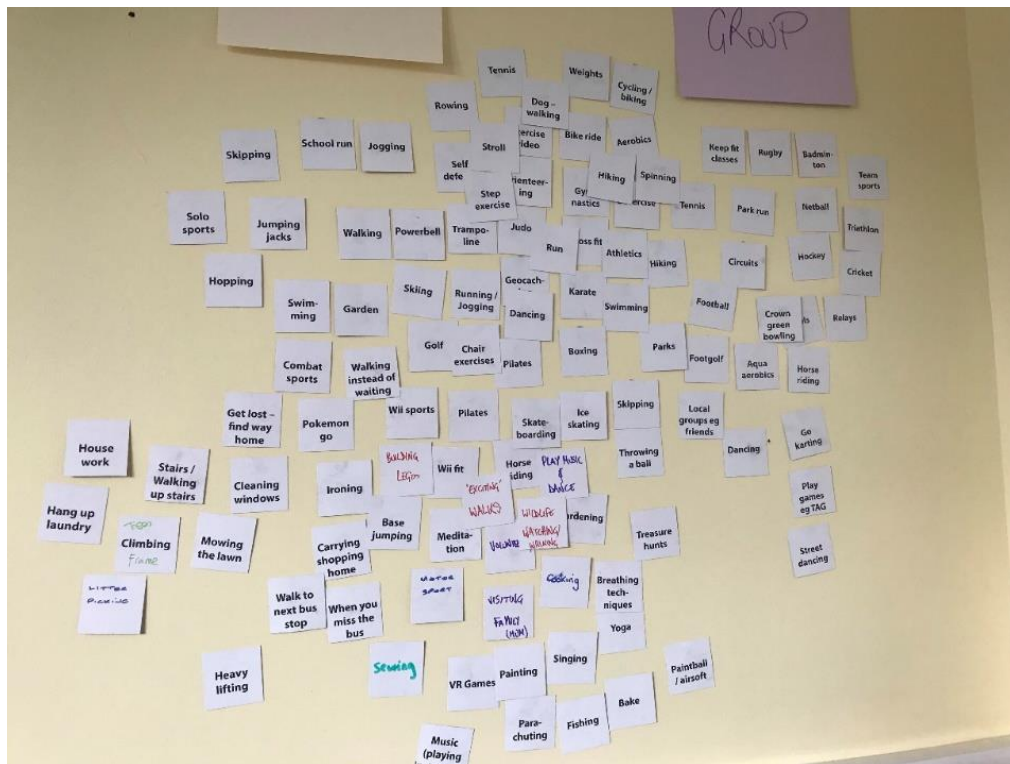


Figure 10. Mapping different types of physical activity in Edlington

Workshop 1: Personas and mapping activities in Edlington

Due to the small number of attendees in the first workshop, the group were given one persona (Olly- recently active but limited by his mental health). After expanding on their personas Capability, Opportunity and Motivation to be physically active, participants used the blank storyboards to explore the personas personal, social and environmental assets in their lives to make them move more. The content of this storyboard is provided in Table 4.

Table 4. Exploring assets to make their persona move more in Balby

Researcher-generated persona barriers and facilitators to physical activity (in relation to COM)	Participant-generated ideas to make their persona move more
<p>Olly</p> <p>Capability Olly is limited by his mental health, but knows that being active is good for their health.</p> <p>Opportunity Olly has access to support and activity sessions through local community groups. He can't afford equipment, but is happy to be active with what he currently has.</p> <p>Motivation Olly enjoys participating as a group with like-minded peers. He plans his week around attending the classes at community groups,</p>	<p>Olly goes to the Hilltop community centre (for job searching and lunch time well-being sessions). He currently drives there but he could start walking instead.</p> <p>In the afternoon, Olly normally goes out for a drive around the nearby countryside and combines this with a trip to the shops/supermarkets. Olly could be encouraged to do smaller shops and therefore walk instead.</p> <p>In the evening Olly goes on Facebook and Edlington Community Matters page to try and set up a group of like-minded people to exercise and be physically active with.</p> <p>Olly knows how to be physically active and could 'recruit and train' people like him to run physical activity classes in their community group.</p> <p>Olly could create an image or a poster to share on Edlington Community Matters page and Facebook and advertise his session (perhaps a walking group), with the session running 3 times a week which could take place either in the morning, afternoon or evening.</p> <p>Olly could combine his walking session with other activities (e.g. shopping) to make them more enjoyable</p>

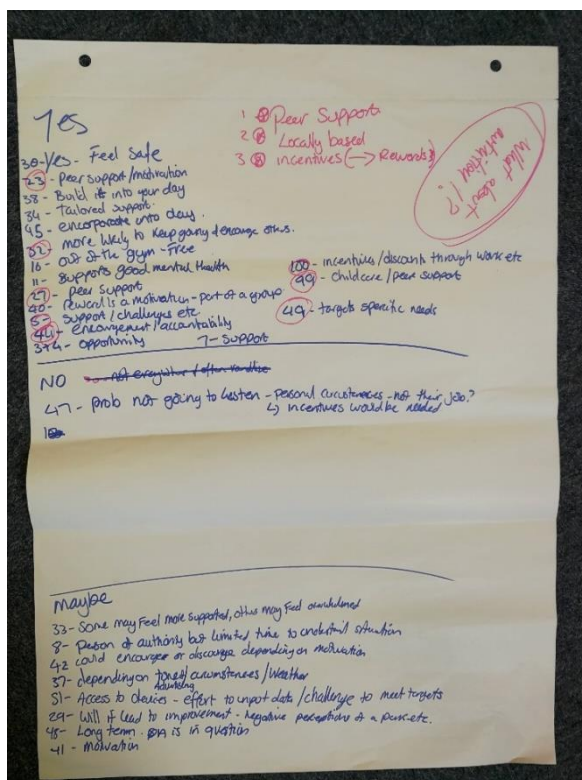
Participants mapped out their persona's storyboard onto a large map of Edlington (Figure 11). In addition to mapping out environmental assets (their persona's home address; walking routes; local parks and green spaces and; local social clubs), participants also expanded in detail about how Olly could set up a physical activity session (e.g. a walking group) with people who was like him (e.g. had similar mental health conditions).

Workshop 2: Prioritising ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity in Edlington

In the second phase of the Workshops, participants completed the card sorting exercise where they were asked to decide whether they liked, disliked or were unsure about ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity. Participants were given blank cards so they could record other ideas that they felt were missing from the card pack. The new ideas and solutions were:

- To be able to drop my children at the nursery and go to the gym to exercise;
- To be able to attend multi-age sessions (for parents and children);
- To be able to use the leisure centre swimming pool; it needs to be advertised and refurbished;
- To advertise the free outdoor gym;
- Information needs to be advertised on Your Life Doncaster and community groups could put their information on this platform;
- Information should be communicated via Facebook, Twitter, School Group text, and the Your Life Doncaster website;
- Need to offer incentives and consider financial constraints/

Workshop 2: Refining ideas in Edlington



Participants discussed the reasons they liked, disliked or were unsure about any of the ideas. The group then expanded and refined their ideas about how to increase physical activity in Edlington.

This next section provides an overview of these community-driven solutions, which are illustrated in Figures 12 and 13.

Figure 12. Exploring ideas to increase physical activity in Edlington

Solution one: Overcoming barriers to physical activity for mums in Edlington

The group felt it was important to have opportunities available for mums. Although there are a range of opportunities available at the ECO centre, ranging from Zumba to chair-based exercises, the lack of childcare facilities was viewed as a key barrier. The group discussed ways to overcome this barrier; they felt one possible solution would be to improve the links between Edlington Hilltop and ECO facilities. Edlington

Hilltop has a creche/nursery (but no large hall for physical activity), whereas ECO has a hall currently being used for a range of physical activities (but no childcare facilities). An alternative solution was to create physical activity sessions that could be attended by parents and their children, as this could help overcome childcare barriers as well as provide an important source of peer support.

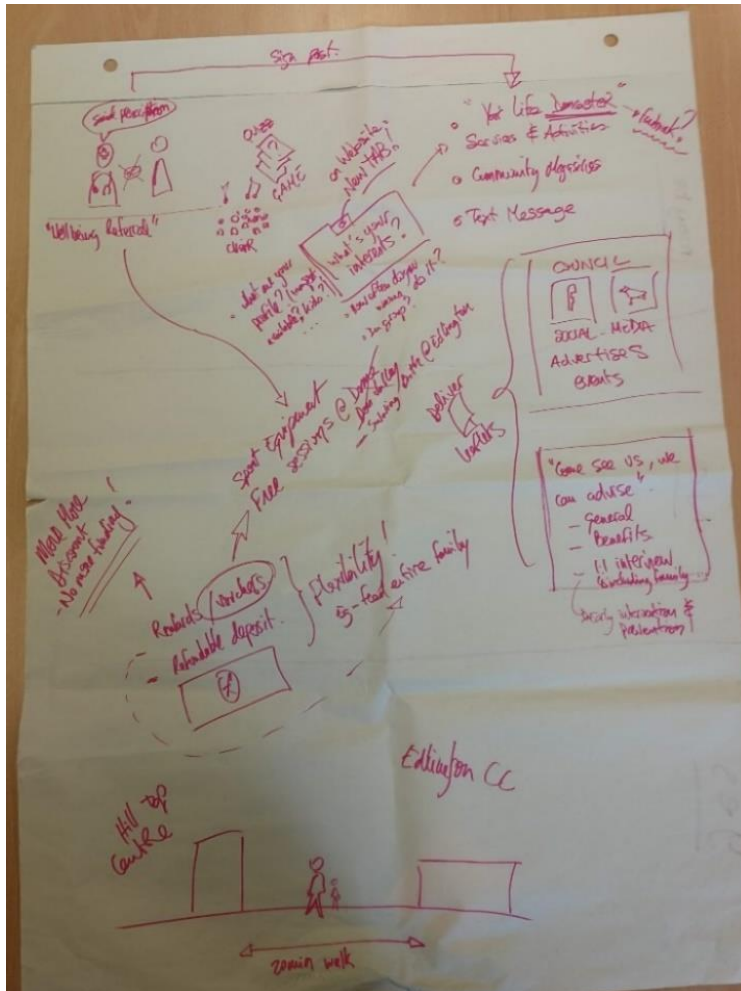


Figure 13. Refining ideas and solutions to increase physical activity in Edlington

The location of physical activity sessions was viewed as important, with activities for mums needing to be in a local and familiar place. The group also felt that incentives could help increase people’s motivation to participate, at least in the first instance, but enjoyment would be needed to sustain those changes. Suggestions included complementary dinners or vouchers for physical activities. They felt the physical activity sessions do not necessarily have to be free, as a small pre-paid fee or refundable deposit may act as an incentive to attend the sessions. This would need to be flexible as money may be a barrier for some mums.

Solution two: Communicating messages about physical activity in Edlington

Although there are a range of physical activity groups available at ECO, the group felt that many people do not know about them. It was important to communicate messages about physical activity using a range of methods, including text messaging and social media (Facebook and Twitter). Messages about physical activity and available opportunities in Edlington need to come from people who are 'like them'. Providing tailored information was viewed as important and one solution was to look at ways to adapt the Your life Doncaster website. For example, people could register their interest (their likes/dislikes/preferences) and the website could provide links to tailored information via email or text.

Solution three: Optimising the Edlington Martinwells Centre

Participants felt that advice and support for physical activity should also come from a GP, especially for people with existing health conditions. The group discussed the importance of social prescribing and felt a 'physical activity' prescription should come from the GP in the first instance and link with available services in Doncaster. The group discussed how ECO works in partnership with Edlington Martinwells Centre; this provides access to GP services, pharmacy, provides health information and support as well as linking patients to free services and support involving physical activity. Participants felt that Your Life Doncaster could also be used in GP consultations to help link patients with available services at ECO and others within Doncaster.

Solution four: Making small changes to the physical environment

Participants discussed existing community assets for physical activity such as the local swimming baths. However, some members of the group felt they needed updating and renovation (e.g. loose tiles in the swimming pool). Small changes to these physical spaces could help support and encourage physical activity.

4.5 Key recommendations for Edlington

Based on the data from Edlington the following community-driven recommendations can be made in relation to how they address an individuals' capability, opportunity and motivation to be physically active:

- Providing opportunities to be active for groups of people with similar circumstances (e.g. mums) could help promote physical activity. The ability to try different activities could reduce capability barriers and increase motivation and enjoyment by allowing participants to find an activity that works best for them.
- Small changes to physical assets (e.g. linking the ECO centre and Edlington Hilltop facilities; making small improvements to existing physical activity spaces such as the local swimming pool) and providing a range of different opportunities to be active (for example, physical activity groups for mums-only, or mums and children) could help overcome opportunity barriers.
- Promoting existing physical opportunities (e.g. Edlington Martinwells Centre) could help encourage people to participate in existing physical activity opportunities.
- Messages about physical activity should come from a GP, especially for those who are managing an existing health condition. This may help them find ways to be active within their own capability limitations.
- Messages about physical activity should also come from people 'like them' using a range of different formats. Reading about ways in which 'people like them' keep active could reduce anxieties around doing activities by increasing psychological capability.
- Promoting and adapting the use of Your Life Doncaster could help people to receive tailored messages about physical activity opportunities available to them.

4.6 Results for Intake

In total 21 members of the community from Intake participated in the first workshop and 18 members participated in the second workshop.

Participants were from Doncaster Council and staff, volunteers, and users of the People Focused Group (PFG) in Intake. PFG is about peer support – people helping people – making everyone’s life better. PFG work with members of the community that have health issues, particularly mental health issues. Two members of staff from a local gym also attended the second workshop.

Workshop 1: mapping different types of physical activity in Intake

Workshop participants mapped out different types of physical activity into (i) traditional vs. non-traditional activity and; (ii) group or individual-based activity. Participants discussed the terms used to describe physical activity.



The group created new physical activity cards. Although the group were encouraged to think about non-traditional forms of activity, they tended to focus on traditional ‘structured’ forms, which included golf, dodgeball, Zumba, rounders, and basketball. There is still a misconception that physical activity refers to structured sport, and stereotypes are common (e.g., a thin person is a fit person).

Figure 14. Exploring ways of communicating about physical activity in Intake.

Workshop 1: Personas and mapping activities in Intake

The group were given three personas; Clare (unemployed exhausted mother), Judith (retired, has health problems, likes to be social) and Alan (a shift worker).

Users of PFG found it difficult to complete the persona task as they felt the hypothetical personas were not reflective of themselves or the wider community in Intake. An example of one of these storyboards is provided in Table 5.

Table 5. Exploring assets to make their persona move more in Intake

Researcher-generated persona barriers and facilitators to physical activity (in relation to COM)	Participant-generated ideas to make their persona move more
<p>Judith</p> <p>Capability Judith is struggling with a hip problem, which reduces her mobility. She is concerned that doing certain things/activities will make problem worse.</p> <p>Opportunity Judith has time to be active during the day, but she must pick up her grandchildren after school (although she enjoys this). Judith is a social person, however none of her friends are retired and it's difficult to find time to see them.</p> <p>Motivation Judith's main priority is to improve their health in a safe way. Her typical habit/routine is to use the car to travel places to reduce her hip problem.</p>	<p>Judith could walk to school to pick up her grandchildren, rather than drive to the school.</p> <p>Judith could take part in bingo at the library, as she enjoys seeing other people. Judith could walk to the library and back.</p> <p>She could walk to the part with her grandchildren after school.</p>

As the group found it difficult to engage with this task, more general ideas about incorporating physical activity into daily routines and 'moving more' were discussed. Many of these suggestions tended to focus on physical opportunities to be active. Suggestions included:

- Increasing walking and cycling
 - Around Town Fields (a large area of public land)
 - Doncaster Town Moor Golf Club
 - Walking routes in local greenspaces and woods
- Using existing physical assets
 - Using Multi Use Games Areas (MUGA)
 - Westfield Park Bowling Green
 - Doncaster Dome
- Exercising at the gym

Some members of the group did discuss ways to increase motivation and capabilities to being active. Some participants felt it was important for members of the community to receive education and advice about what physical activity is best to do based on a specific health condition, for example, osteoarthritis or anxiety. It was also important to provide advice about the potential benefits of activity, such as weight loss.

Peer support was viewed as important in order to initiate and maintain activity. The group felt opportunities to meet like-minded people or people with a similar circumstance would help increase enjoyment and motivation to take part in activity.

Members felt that many of the physical assets available, such as the newly regenerated and improved Pavilion, were important assets. However, they discussed how some members of the community didn't want to pre-book into physical activity groups or sessions, as they wanted to be able to informally 'pop in'.

It was important for the community to feel they have some ownership of the facilities and opportunities available and what they could be used for and when. Using existing local assets within their community could help increase ownership of future physical activity initiatives.

Participants mapped out their persona's storyboard onto a large map of Intake (Figure 13). Participants mapped out physical assets that were available in their community. This included identifying local parks (e.g. Town Fields park; Elmfield Park; Grove Park) and local community groups and clubs (e.g. Parklands Sports and Social Club; local tennis club; Town Moor Golf Club; MUGA facilities).

Figure 15. Mapping assets in Intake



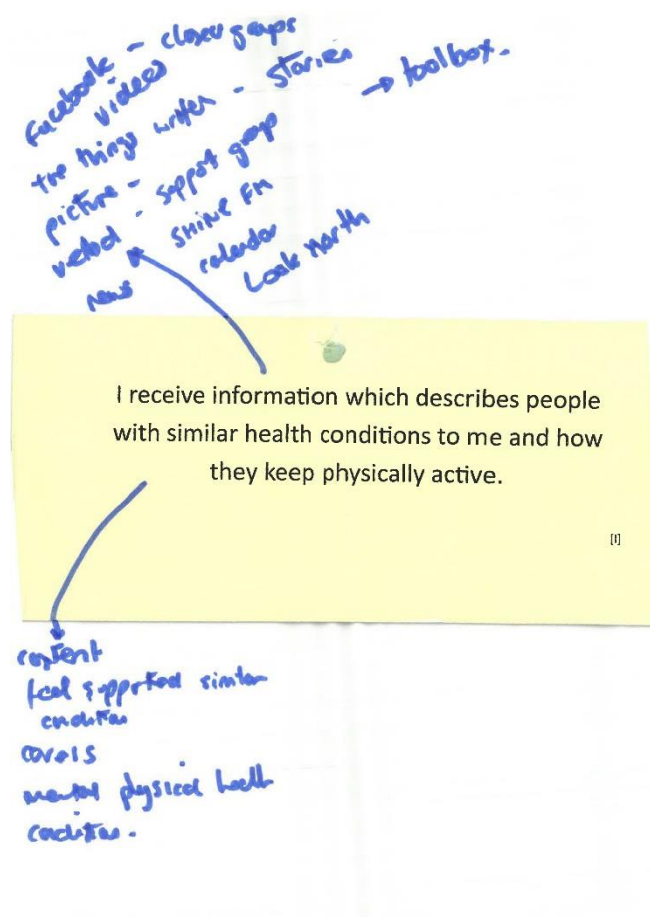
Workshop 2: Prioritising ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity in Intake

Participants in the second stage of the Workshop were from Doncaster Council and staff, volunteers, and users of PFG in Intake. Staff from a local gym also attended this second workshop. Participants completed the card sorting exercise, where they were asked to decide whether they liked, disliked or were unsure about ideas that might tackle issues of capability, opportunity and motivation to engage in physical activity. Participants were given blank cards so they could record other ideas that they felt were missing from the card pack. Although some members of the group found this task challenging due to learning difficulties, generally participants liked all of the potential ideas and solutions.

Workshop 2: Refining ideas in Intake

The group expanded and discussed their ideas about how to increase physical activity in Intake. This next section provides an overview of these community-driven solutions and recommendations.

Solution one: Communicating messages about physical activity in Intake



The group discussed ways in which messages about physical activity should be communicated. This is illustrated in Figure 16.

The group felt that physical and mental health conditions could be a barrier to physical activity, and it was important to feel supported from people who were like them.

Messages about physical activity should describe people who were like them and how they were active.

Figure 16. Communication about physical activity in Intake

It was important that messages used a range of formats; the group felt that standard leaflets and brochures would be unsuitable due to some people having reading difficulties. The quantity of information was also important; too much information could make people feel overwhelmed. The group felt that videos, pictures, local radio/TV and the use of social media (e.g. Facebook) would be effective ways of communicating about physical activity and help to reach out to a wider audience. The group also felt that communications about physical activity should be positive and should discuss the benefits of engaging in physical activity (rather than the potential negative aspects of being inactive).

Solution two: Linking the community with the local gym

The group discussed how doing physical activity together with people who are like them (e.g. with a similar health condition or other circumstance) may help increase their enjoyment in physical activity, as well as increase their confidence in their ability to be active. Staff from the local gym discussed how community members could attend their gym using a 'free pass', however concerns were raised about the need for a 'passport to fitness' from their GP. Some members however felt linking community groups with local gyms would be a good idea, as a group of their community members could attend the gym together and offer each other support.

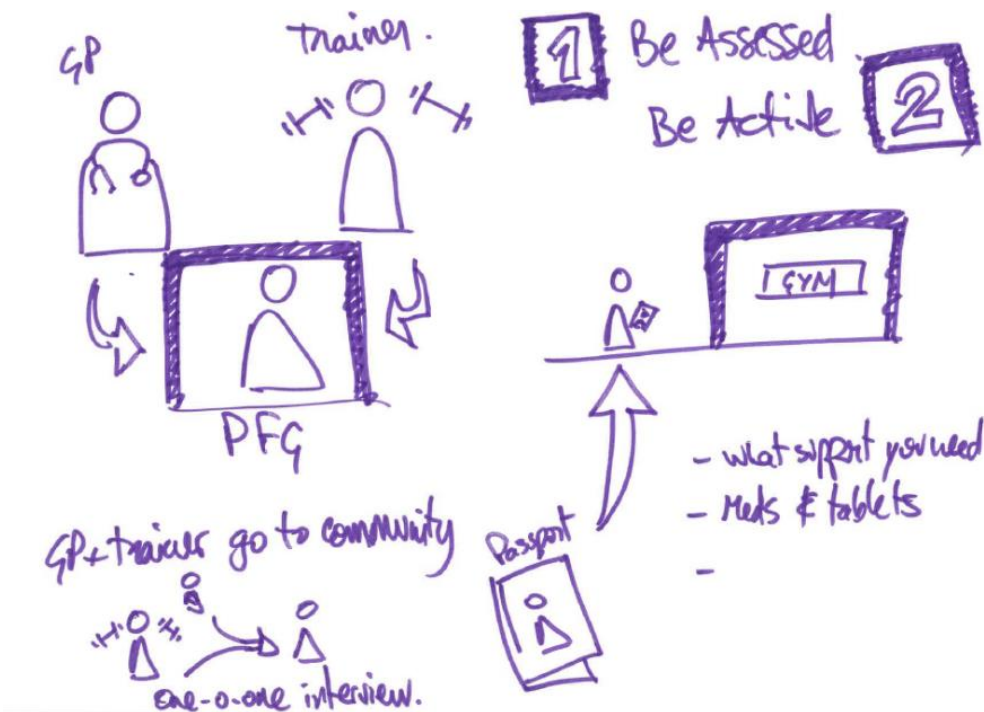


Figure 17. Using available physical assets in Intake

Solution three: Establishing novel ways to be physically active in Intake



Staff members of PFG discussed how they are trying to bring 'fencing' into the community group.

The group also discussed how they already have assets available in their community, such as Xbox 'indoor bowling' games, that could be used as a way of getting their community to 'move more'.

Figure 18. Identifying novel ways to be physically active in Intake

Solution four: Bring new skills into the community in Intake

One member of the group discussed how members of their community could become 'community physical activity champions', whereby they learn a new physical activity skill and bring those new skills back into their community to teach others.

The community are eager to be involved and to new learn new skills as part of the LDP work, as this may be one solution that would help ensure that physical activity initiatives remain led and driven by community members.

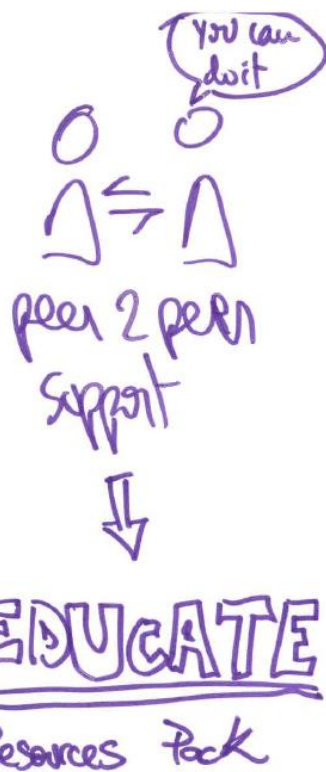


Figure 19. Training 'community physical activity champions' in Intake

Solution five: Developing habits and routines for physical activity in Intake

The group discussed how it was important to establish good routines to 'move more' and be more active as part of their daily lives. It would be important to bring activity into their community group on established days and times every week. Members of the group discussed how they received Facebook notifications if they were a member of a group on the platform, and this could be one way in which their community could begin to set up routines for activity. Other members discussed how they already received text messages to remind them to attend their football group, whilst others discussed how they used FitBits to track and monitor their activity. These readily available assets which are already used within the community could be used to establish regular routines for physical activity.

Solution six: Small changes to physical spaces

The safety of available parks (e.g. Town Fields) was discussed; with many people feeling that they were unsafe to use due to broken glass, lack of lighting, and drug use. The group discussed using Doncaster Council mobile phone app to report safety issues, however they were unsure where the information goes and who would address their concerns. They suggested using community police officers to monitor the safety of existing green spaces, however they felt this would not be possible due to lack of funding.



The group discussed how the community themselves could become 'ambassadors' for their greenspaces, which would provide recognition that these parks are cared for by the community and would help advocate these spaces for physical activity.

Figure 20. Community ambassadors for green spaces in Intake

Small changes to existing parks could help promote these green spaces as a place for physical activity. The group discussed how there used to be a designated dog walking area (and dog bins) in Town Fields, however these facilities are no longer available. Dog fouling in this park is a concern and the group felt it was a barrier to using those spaces. Establishing a designated dog walking area and bringing back dog bins are small changes to green spaces that could be the start of promoting those areas as a place for physical activity.

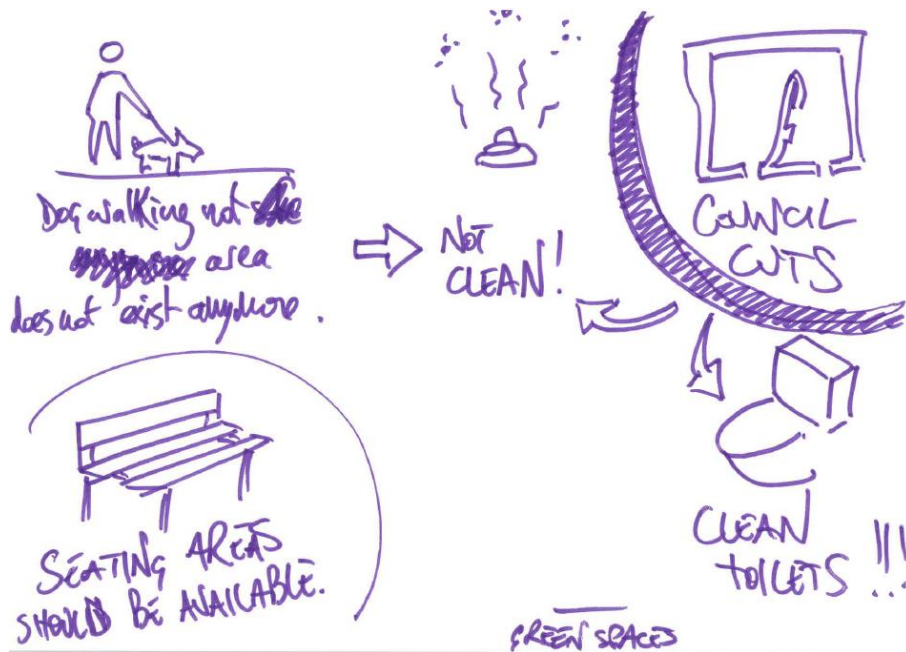


Figure 21. Making small changes to green spaces in Intake

4.7 Key recommendations for Intake

Based on the data from Intake the following community-driven recommendations can be made in relation to how they address an individuals' capability, opportunity and motivation to be physically active:

- Messages about physical activity need to describe people 'like them' and how they can be active within their own capability limitations. Messages should use a range of formats, including pictures and videos.
- Promoting the use of available physical assets (e.g. local gyms) and linking these facilities with community groups should be encouraged.
- The opportunity to try novel activities that are not viewed as 'traditional' forms of exercise (e.g. fencing) could help overcome negative stereotypes of physical activity and increase perceptions of capability. It will also provide opportunities for people to find an activity they enjoy and are motivated to continue with, and the opportunity to develop their confidence and skills in being active.
- Providing opportunities to be active for groups of people with similar health conditions could tap into important sources of social support.
- Establishing good routines and habits for getting the community to be active and 'moving more' is important. Using available assets that are being used in the community (e.g. social media notifications, text messaging) should be encouraged.
- Establishing 'community champions' who could bring new physical activity skills into the community could help ensure initiatives to increase activity remain led and driven by the community members.
- Small changes to physical assets (e.g. green spaces) and establishing 'community ambassadors' could help improve the safety and appeal of these areas as places for physical activity.

5. Academic commentary

This section discusses some of the community-driven recommendations from an academic perspective.

Incentives and rewards

Each of the three communities discussed how incentives, such as vouchers or other types of rewards, could help increase people's motivation to take part in physical activity. However, research from the field of behavioural science has shown that conditional incentives (e.g. free membership to a sport facility) do not affect physical activity (Barte & Wendel-Vos, 2017). Although conditional incentives or rewards (e.g. rewards for reaching physical-activity goals) have been shown to have some positive effects on physical activity, it is unclear whether they lead to lasting changes in physical activity. It is psychological determination and motivation which is key to maintaining those changes (Michie et al., 2011).

Addressing stereotypes about physical activity

It is important not to reinforce negative stereotypes about exercise (Chalabaev et al., 2013). Messages about physical activity need to focus on the different ways of being active (not just structured sports) and include the range of potential benefits, such as improving mood, rather than focusing only on weight management. This will help target people's psychological capability, that is, their knowledge of what physical activity means. Some members of the group in Intake felt that people only need to be physically active if they need to manage their weight. Our reflections on the conversations at Intake suggests that many people hold stereotypical beliefs about physical activity, such as 'thin' means 'fit'. Messages about physical activity should therefore address how physical activity has a range of benefits, such as improving mood and strengthening the body, not just weight management. This will help increase people's knowledge about what physical activity means (psychological capability) (Michie et al., 2011).

Encouraging the use of available physical opportunities and assets

Community members across each of the three communities discussed the need to encourage the use of available physical opportunities and assets. This included the use of physical activity sessions at ECO centre in Edlington and the local gym at Intake. However, providing access or encouraging the use of existing assets such as the use of the local gym will not be suitable for everyone, especially as many people do not like gyms or traditional forms of exercise. It may also reinforce negative views about physical activity. It is important to have the opportunity to try different 'novel' activities that are not associated with negative perceptions. Across each of the communities, participants discussed different 'novel' ways to be physically active, such as 'fencing' in Intake and 'tea in the park' at Balby. Such 'novel' activities are less likely to be associated with negative connotations, as they are not a 'common'

form of exercise. Providing individuals with the opportunity to try a range of activities would help people find one that they enjoy, as well as increase confidence in their ability to be active.

6. Summary

This section provides key recommendations that are relevant for all of the three communities in Doncaster.

6.1 Key recommendations

Communicating messages about physical activity

The way in which physical activity is promoted is important. Although people tend to have good knowledge about how to be physically active and the benefits of being active, stereotypes are common. For example, physical activity tends to be viewed as structured sports or exercise, with the aim of activity being to lose weight, with 'thin' people viewed as 'fit and active' people. Efforts to promote physical activity need to address these common misconceptions and stereotypes. Messages used to promote physical activity should include a range of different types of activities and different ways to be active. Physical activity guidance needs to promote the range of benefits of physical activity, such as improving mood and well-being and muscle strengthening, in addition to weight management. Physical activity messages also need to highlight the ways in which people can be active within their own health limitations. This will help increase people's psychological capability; their knowledge of what physical activity means and its potential benefits. Messages need to come from the community and from people 'like them', either in terms of a similar health condition or other circumstance. This will help address negative stereotypes of physical activity and increase perceptions of capability. The format of physical activity communications is important. Leaflets and brochures are viewed negatively and may be unsuitable for some groups of people. Novel methods of communication, including pictures, videos, radio, and TV need to be considered. Using existing community assets, such as community websites, social media pages, and local newsletters to promote physical activity messages should be encouraged. Using community wellbeing officers to communicate messages and encourage behaviour change should be explored as one possible way to promote physical activity, as many participants felt support from others was important in being active and trying new activities. However, this potential solution needs to be discussed with a wider range of community members.

Opportunities to try a wide range of different activities

Providing opportunities to try a wide range of different activities would help increase capabilities and motivation to be physically active. Providing opportunities to try activities that are not generally viewed as a form a 'typical exercise' would help address negative stereotypes (e.g. "I'm no good at football") and increase people's knowledge and perceptions of what physical activity means. Opportunities should be provided that are sensitive to individuals' health limitations or other circumstance. Having the opportunity to try a wide range of different activities within their

communities will help increase people's motivation to engage in activity. It will allow individuals the opportunity to find something they enjoy taking part in, as well as the opportunity to increase their confidence and skills in physical activity and overcome any concerns they may have about physical activity. Enjoyment is a key motivator for physical activity and encouraging people to lead on and try different activities could also encourage people to take ownership of community-led initiatives.

Establishing good routines and habits

Developing good routines and habits are important to sustain changes in physical activity. Using tools that are already being used in the community for supporting routine behaviours (e.g. social media notifications, text messaging, FitBits) should be encouraged. For example, these existing assets could be used as a tool to remind people of physical activity initiatives in their community, or they could be used as a way of encouraging regular periods of physical activity and 'moving more' as a part of their everyday routine. Encouraging activities which can be undertaken flexibly alongside other priorities could help establish routines for activity. For example, integrating regular physical activity into existing community groups or initiatives, or using existing community physical spaces as a regular meeting point for activity could potentially lead to the development of physical activity habits and routines. Encouraging the development of routines will also help increase individual's confidence in their ability to be physically active.

Promoting existing physical and social opportunities

Having social support from people who were similar to them was important to the vast majority of people who participated in the workshops. Integrating physical activity into existing community groups or initiatives may help tap into existing sources of support. Providing opportunities to be active for groups of similar people, either in terms of a health condition or other circumstance, may help increase enjoyment, motivation, and confidence to participate in activity. Small changes to physical spaces and green parks, such as repairing broken tiles in swimming baths or introducing dog bins/designated dog walking areas, may help advocate those places as places for activity.

7. Evaluation of the co-design methodology

Co-design is a really important principle of intervention development since it ensures that the solutions developed are acceptable to the relevant communities, that there is perceived ownership of the ideas within those communities, and that, ideally, there is a commitment from the people involved in that co-design to drive forward the ideas within their communities. However, co-design is not a magic bullet and there are limitations to the approach, some of which we tried to address with varying success and some of which remain limitations to the approach. This section outlines these issues, our learning, and makes recommendations as a result of this.

The people involved in the co-design process

Our original intention was to run our co-design sessions with as representative a group from the geographical communities of focus as possible. This is important to ensure that the solutions arrived at within the co-design process meet the needs of the community as a whole. However, as the co-design sessions happened within specific community organisations that had a specific role within that community (i.e. serving people with mental health issues, or specific conditions such as autism), the people who attended the co-design sessions were predominantly organisers of, and clients of those organisations. As is the nature of this work, it was difficult to assess who would attend the workshops until the day arrived and therefore, we did not know so many participants would have learning difficulties. Following on from Workshop 1, we were aware that these individuals were not representative of those geographical communities and therefore tried to undertake activities that enabled our co-designers to think more broadly than their own experiences (see point 2). There were some individuals who attended the co-design sessions from outside of these voluntary organisations too, but these too were not representative of the local community and their presence changed the direction of the sessions (see point 3). In summary, our co-design sessions were not representative of the local communities, in particular, families with children, and people in full-time employment were underrepresented. The solutions discussed and our recommendations are therefore necessarily limited, and we would need to undertake further work with the wider community to understand how we might best support them to be more physically active.

Thinking beyond the 'self'

One of the exercises that we used to try to enable the people involved in the co-design process to think of others in their community was a personas exercise. This approach has been utilised widely in co-design and co-creation work (e.g. see <https://www.interaction-design.org/literature/article/personas-why-and-how-you-should-use-them>) and had been used previously by members of the co-design team. However persona activities require that individuals have an ability to understand that others have perspectives, thoughts and beliefs that are different from one's own (Premack & Woodruff, 1978). People with autistic spectrum disorders, schizophrenia,

learning difficulties and attention deficit disorders often experience challenges in adopting or understanding the perspectives of others. Our personas exercise was not as successful as we had hoped in our co-design groups and this was likely to be due to the large numbers of participants with a range of learning abilities which impacted on their ability to engage with this task. Many participants struggled to put themselves 'in someone else's shoes' and could only properly contribute when they were considering what they personally did and wanted. The persona activities were primarily completed by volunteers and staff of the community organisations, rather than users of the organisations. Some participants in Intake also felt that the personas did not reflect their community members.

One challenge for co-design approaches is ensuring that all voices are heard, and all members of the workshop have the opportunity to voice their ideas and opinions. In some workshops, some strong characters influenced the input of others. In particular, some members of the co-design workshops took on an 'advocacy' role and spoke on behalf of other group members, especially if those members had learning difficulties that impacted on their ability to engage with the tasks.

We adapted the second co-design workshops to make sure that the tasks could be engaged in (at different levels) by all who attended, with a particular focus on concrete ideas and suggests that people could respond to from their own point of view. This is an important learning point for others working with similar groups in the future.

As is the nature of co-design methodology, the types of recommendations and solutions that arise from co-design workshops depend upon the people in the room. That is, it is always a possibility that different recommendations may have arisen if there were different participants present. Indeed, the safety of green spaces in Edlington was a key issue in the Phase 2 work, however it did not feature as strongly in the co-design work. This is not to say that the safety of physical spaces is not an issue in Edlington, rather, it was the case that other factors relating to physical activity were more important for the participants in the room.

People in the groups from 'outside'

The participants within a co-design group are critical for the direction and focus of the activities and the outcomes and the make-up of the group is therefore important. In addition to the members of the local communities, others also attended and contributed: a gym instructor and advocate of the local gym in Intake, and council community officers in Balby. The perspectives and contributions of those individuals were noticeably different to those of the local community and this influenced the conversations and focus of the discussions and ideas. For example, in Intake, there was a long discussion about barriers to attendance at the gym and what steps could be put in place to overcome some of these. Importantly, this was in reference to a specific gym with specific resources, and rules about attendance. The ideas were

not necessarily generalisable to other gyms, nor to other members of the community who did not attend the voluntary community organisation where the workshop was being held. Likewise in Balby, community support officers talked about the potential role they could play in directing members of the community to services, but it was not clear if this is something that the community members wanted, nor if the community officers were the right people to offer this. Furthermore, some people who attended the workshops were not necessarily from the community that the workshops were held in. For example, not all members of PFG were from Intake.

Incorporating people from 'outside' of the community in the co-design sessions therefore influenced outcomes. The makeup of groups and the roles of individuals within them should therefore be considered carefully. External members should ideally be briefed about the boundaries of their role within those sessions.

Integrating theory into the co-design process

Throughout our work on the Doncaster LDP we have drawn on the COM-B model (Michie et al., 2011), that is we have sought to understand the capability, opportunity and motivation factors that influence people's physical activity levels. It is important to draw on theory because people are generally not good at understanding all of the factors that impact on their behaviours. In particular, people tend to focus on some factors e.g. the pros and cons of physical activity, rather than others e.g. habits. The danger is that without theory, co-design might focus exclusively on, for example, physical opportunity i.e. having the space, time and resources to be physically active, without considering that one also needs to be motivated to be physically active, having beliefs that it is enjoyable and having habits and routines to incorporate it into your day. We integrated COM-B into the co-design tasks in a number of ways:

- The physical activity card sort task explored people's meaning of physical activity. This was designed to increase people's psychological capability; knowledge of what physical activity can mean so that this knowledge could be drawn on in subsequent exercises.
- The mapping exercise focused on exploring the opportunities or assets that the community had for physical activity. It also explored how people had the capability and motivation to engage with those opportunities including the possible barriers.
- The personas were intended to explore how individuals with different capability, opportunity and motivational barriers might engage in physical activity. As outlined above, this activity was not generally successful with these groups.
- The ideas card sort task drew on capability, opportunity and motivation barriers that had been identified in Phases 1 and 2 and posed potential ideas to increase capability, opportunity and motivation.

- The discussion of ideas task focused on ideas that had different foci with regard to capability, opportunity and motivation so that a range of options were discussed, and ideas generated.

We have also considered COM-B in making our recommendations following the co-design workshops, with our recommendations including ideas to address issues of capability, opportunity and motivation. It remains important for the success of services and interventions that they consider these in combination rather than focusing on just one. This is a potential danger of the asset-based approach which could focus exclusively on physical and social opportunity. A broader definition of assets to include assets within an individual e.g. psychological stamina and determination to be physically active is recommended to avoid this potential problem.

8. Recommendations for future work

Beyond the recommendations that we have made in this report for services and intervention to increase physical activity in each of the three community settings we also recommend the following in terms of the future work of the Doncaster LDP.

Families with children

We know that families with children were one of the target groups for this LDP work. In Phase 1 we identified some important findings with regard to the very different amounts of physical activity outside of school that children were engaging in, and that these levels were significantly below recommended levels. In Phase 2, family physical activity was discussed in some of the interviews but was not a key focus. In Phase 3 there were very few parents with children who engaged in the co-design workshops. We do not therefore believe that we have currently addressed the needs of families with children to be more physically active. We recommend that further work is done to explore the issues affecting families in the different communities, perhaps through focus groups and observation activities in local schools, so that activity levels can be addressed in children and families given that they are likely to have quite different needs to the voluntary community groups with which we have primarily worked. We have experience of working with children and families around physical activity as part of Move More Schools Sheffield (Dr Gareth Jones, SHU).

Communities of experience

Our LDP work has focused on a number of geography-based local communities within Doncaster. However due the course of our work we have recognised that we have actually been working with a number of different types of communities. The voluntary community organisations, while located within specific geographical communities, are predominantly groups of people with shared experiences who have a sense of community as a result. PFG in Intake, for example, draws people together from across Doncaster and wider areas who have mental health issues, and who seek others with similar experiences and those willing to offer support and advocacy. Within these voluntary communities people also talked about being members of communities based on people with similar health conditions (e.g. autism). Having social support from other similar others was important to most of the people we spoke to. It is important to recognise that there are many different communities, and that they do not all have the same needs with regard to physical activity. Understanding and mapping these communities may complement work underway to map the assets available within the locality and we recommend that this work is undertaken. Social network analysis may be one approach to this work.

9. References

Barte, J. C., & Wendel-Vos, G. W. (2017). A systematic review of financial incentives for physical activity: the effects on physical activity and related outcomes. *Behavioral medicine*, 43(2), 79-90.

Chalabaev, A., Sarrazin, P., Fontayne, P., Boiché, J., & Clément-Guillotin, C. (2013). The influence of sex stereotypes and gender roles on participation and performance in sport and exercise: Review and future directions. *Psychology of sport and exercise*, 14(2), 136-144.

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*, 6(1), 42.

Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind?. *Behavioral and brain sciences*, 1(4), 515-526.

Ritchie, J. & Spencer, L (1994). Qualitative data analysis for applied policy research. In *Analysing Qualitative Data*, pp. 173–194 [A Bryman and RG Burgess, editors]. London: Routledge.

10. Appendix

- **Appendix 1.** Persona building
- **Appendix 2:** Example persona
- **Appendix 3:** Map of Balby
- **Appendix 4:** Map of Edlington
- **Appendix 5:** Map of Intake

Appendix 1. Persona building

COM-B domain	Character					
	Olly <i>"recently active"</i>	Clare <i>"exhausted mother"</i>	Judith	Alan <i>"shift worker"</i>	Liz	Craig
Capability	Limited by their mental health. Knows that being active is good for their health.	Previously has been active, so knows what to do etc. Has gained weight since having children, and finds she gets out of breath quicker.	Struggling with a hip problem, which reduces mobility. Concerned that doing certain things/activities will make problem worse.	Knows what they need to do to be active and have the ability to do physical activity having previously been a gym member	Previously ran for a local club. Unsure of any local running clubs in the area.	Mental health can limit their participation in activities if having a 'bad day'. Able to participate in sports, has been active all their life.
Opportunity	Support and activity sessions through local community group - don't run at weekend though. Can't afford equipment - but happy to be active with what they currently have.	Limited time to be active, due to having three children that require care. Has to travel outside of their community for a good swimming pool/sports facilities. Husband works away during the week and no immediate family nearby for support.	Has time to be active during the day, but has to pick grandchildren up after school. None of their friends are also retired and it's difficult to find time to see them.	Lacking time to be active due to working long shifts and differing shift patterns. On their feet all day at work.	Now that their children are old enough to take themselves to school and back, they have more time in the evening to be active. Goes to an exercise class with a colleague from work twice a week in Doncaster town centre.	Has the time to be active, and is happy to travel to other areas to be active and use other green spaces, including the countryside. Happy to be active on their own, don't want to be held back by others.
Motivation	Enjoys	Priority is for her to	To improve their	Feel they should	Struggles to find a	Active to improve

	<p>participating as a group and with like-minded peers.</p> <p>Plans week around attending the classes at community group.</p>	<p>care for her children and has a routine to ensure her children attend the right classes etc.</p> <p>Too tired at the end of the day to be active.</p>	<p>health in a safe way.</p> <p>Typical habit/routine is to use the car to travel places to reduce hip problem.</p>	<p>be active to improve their health and because their friends are.</p> <p>Wants to be active, but has to prioritise earning money.</p>	<p>routine with the exercise classes due to having to change things to be with their children.</p> <p>Wants to get back to running and competing in races - doesn't think it's safe to run outside in local community.</p>	<p>their health and to manage mental health.</p> <p>To keep fit and keep pushing themselves in the sports that they do.</p>
Practical	<p>Finance: limited due to being unemployed</p> <p>Time: plenty of time to be active throughout the week</p> <p>Mobility: does not have own car, relies on public transport. Not confident in ability to walk places</p>	<p>Finance: money is tight, but can afford to do activities with the children etc.</p> <p>Mobility: has own car</p>	<p>Finance: not financial limitations</p> <p>Time: plenty of time to be active throughout the week</p> <p>Mobility: has own car</p>	<p>Financial: earns enough money to get by.</p> <p>Time: can be hard to find, due to working long shifts and changes in shift patterns.</p> <p>Mobility: has own car.</p>	<p>Financial: money is not a problem.</p> <p>Technology minded: uses social media and has sport gadgets e.g. FitBit.</p> <p>Time: usually has the time but has to make changes to be with children etc.</p> <p>Mobility: relies on public transport to get to work etc.</p>	<p>Financial: some spare money - has to prioritise bills.</p> <p>Time; has the time and flexibility to be active.</p> <p>Mobility: no car, but will find a way to get somewhere e.g. cycle or public transport.</p>
Background	<p>Age: 40-50</p> <p>Marital Status: divorced - has a child who has moved away to</p>	<p>Age: 30-40</p> <p>Marital status: married with children, husband works away</p> <p>Occupation:</p>	<p>Age:60-70</p> <p>Marital status: widowed, children live away from home.</p>	<p>Age: 20-30</p> <p>Marital status: single, living alone.</p> <p>Occupation:</p>	<p>Age: 50-60</p> <p>Marital status: married, two teenagers living at home.</p>	<p>Age: 40-50</p> <p>Marital status: single, lives alone</p> <p>Occupation: unemployed, long-</p>

	university. Occupation: unemployed due to illness	unemployed, stay at home mum	Occupation: retired	factory worker	Occupation: working full-time	term sick
What's the most important thing for this person?	Keeping well, particularly their mental health.	Being able to provide their children with the support and opportunities they need	Seeing friends and family	Paying the bills	Looking after family	Doing things they enjoy
What would this person change in their community?	More groups / classes for people with mental health issues, running all through the week including the weekend.	More convenient location of sports facilities/swimming pool	Support/guidance for people living with similar health problems as them	More time and motivation to be active	Better/safer greener spaces to use for walking/running	Better/safer routes for cycling walking around the town.

Appendix 2. Example persona



Clare

Age: 34



Living / Family situation

**Unemployed and stay at home
Married with 2 children
Husband works away in the week
and no family nearby for support**

Hobbies

Things that are important to me

Provide my children with the support and opportunities they need

In my community, I would like...

**More convenient location of
sports facilities/swimming pool**

About me

**Often using my car
Used to be active but have gained
weight since having children and
I get out of breath quicker**

Attitude to technology

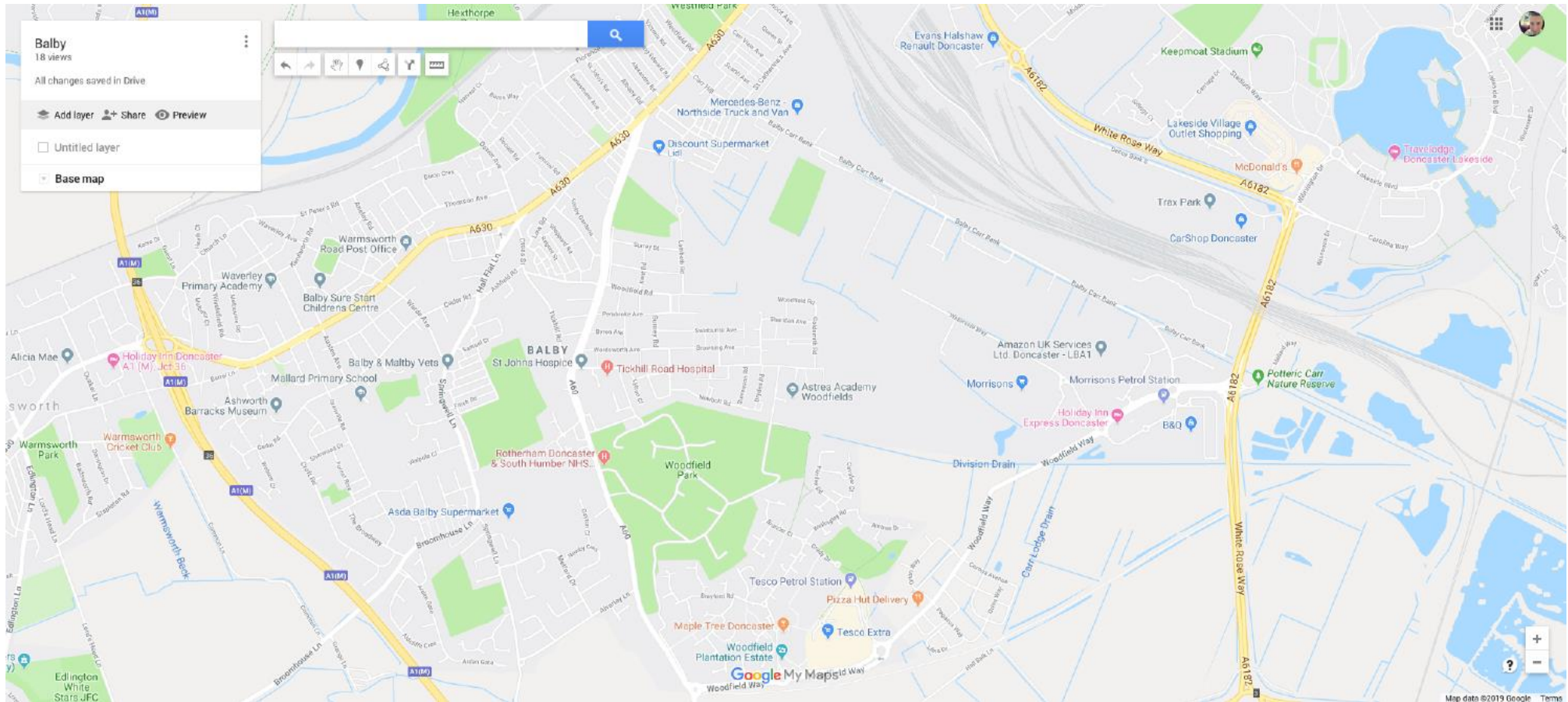
Finance situation

**Money is tight, but can afford to
do activities with the children**

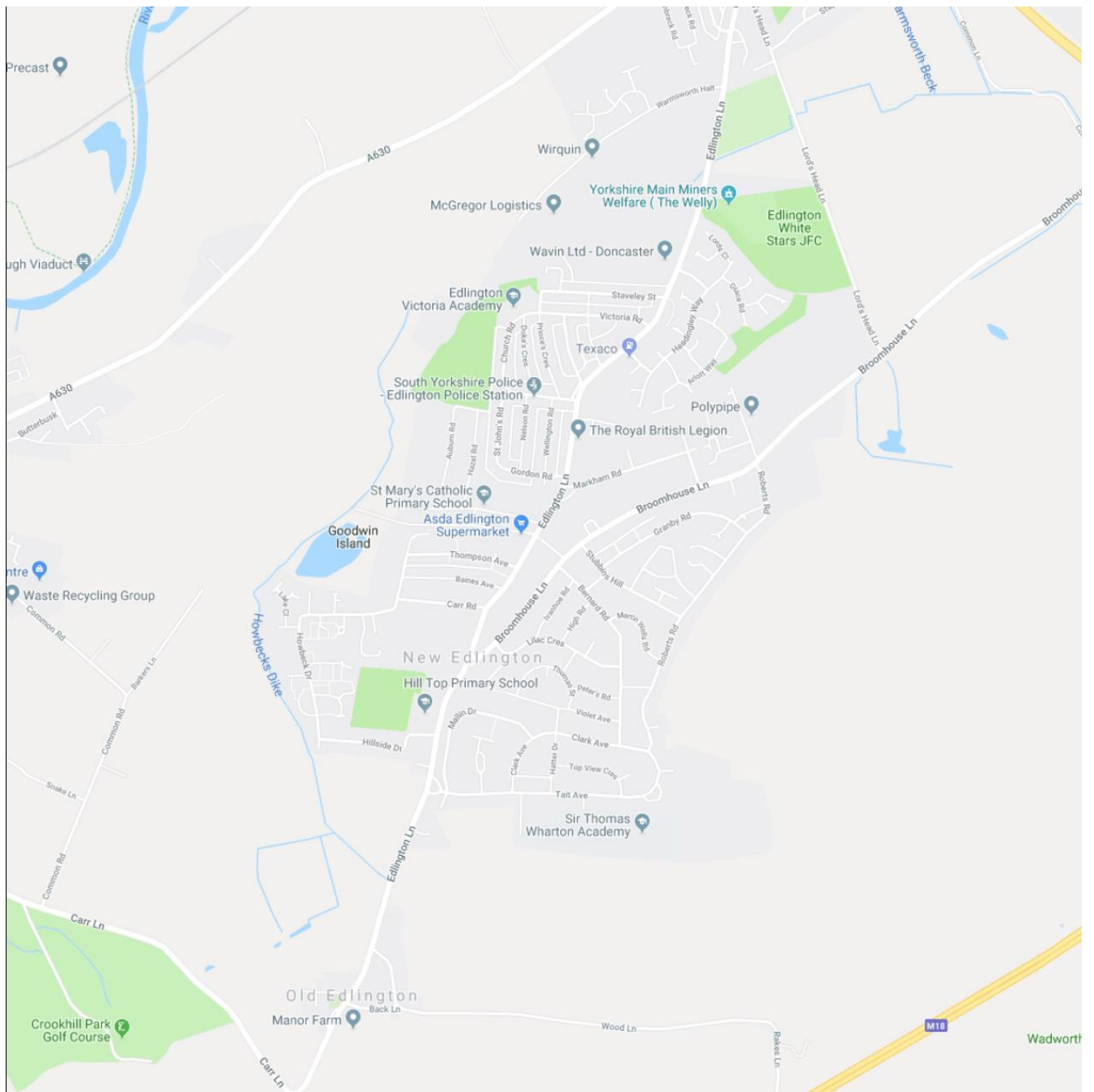
I find it difficult to ...

**Find time to exercise when my focus is on my children
Exercise at the end of the day as I am too tired**

Appendix 3. Map of Balby



Appendix 4. Map of Edlington



Appendix 5. Map of Intake

