PRO BONO ECONOMICS

Assessing the benefits of The Rainbow Club

Advice on feasibility and data requirements

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Action For Refugees In Lewisham

Rainbow Club

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Executive Summary

Action for Refugees in Lewisham (AFRIL) asked Pro Bono Economics and Regeneris Consulting for advice on how to assess the benefits of the Rainbow Club. This is a Saturday school that provides refugee children aged 4-11 with extra support to help improve their writing, literacy and numeracy skills, and increase their confidence and wellbeing.

AFRIL currently collects data which shows good outcomes for children who attend the Rainbow Club in relation to skills and wellbeing. These could potentially result in a range of economic and social benefits, including:

- **Improved wellbeing of refugees and volunteers:** the support provided by the Rainbow Club could improve children's confidence and help them better integrate into society. Volunteers may also enjoy increased wellbeing, as well as gaining skills and experience.

- **Fiscal savings:** improvements in school attendance/reduction in truancy could reduce public expenditure related to crime, health, and social services.

- **Increased future earnings:** improvements in educational attainment could result in better attainment at GCSE level and improved earnings from employment for children in later life.

The economic impact of the Rainbow Club depends on the extent to which improvements in outcomes are attributable to the Rainbow Club (as opposed to other factors), and the economic value of these outcomes. Both of these are subject to considerable uncertainty, based on available data, and **further evidence would be needed to assess the economic impact of the Rainbow Club** in relation to:

- The likely outcomes for children in the absence of the Rainbow Club. Comparison of the actual improvements with the Club against this 'counterfactual' scenario provides a basis for assessing the attributable impact of the Club.

- Evidence on the extent to which improvements in the outcomes targeted by the Rainbow Club are related to economic and social outcomes, such as school attendance and academic attainment at GCSE, that can be readily monetised using existing estimates of economic value.

Executive Summary

Key recommendations for data collection

To address the two areas identified above, AFRIL may wish to consider gathering additional data in two areas.

- **Outcomes in the absence of the Rainbow Club:** in principle this requires data on outcomes for a group of refugee children with similar characteristics to those who attend the Club. This is likely to be quite challenging to collect in practice, given the very specific characteristics and circumstances of this group of children. Furthermore, it would require information on the same set of outcomes that are collected by the Rainbow Club for children who do not attend the Club, which may not be available. If it is not possible to identify a reliable comparator group, then a more feasible approach may be to seek information to inform an expert judgment on what proportion of observed improvements can plausibly be attributed to the Rainbow Club. Ideally, this will be informed by some evidence on the impact of comparable programmes or the input of independent experts. Whilst this approach is usually much less reliable than evidence based on a good comparator group, it can help illustrate the potential value of the Rainbow Club to others.

- **Strengthen evidence on the extent to which improvements in the outcomes targeted by the Rainbow Club are related to economic and social outcomes, such as school attendance and academic attainment at GCSE:** this would required the Rainbow Club to systematically collect data tracking school attendance and subsequent academic attainment for children who attend the Club. This data could be used to better understand how these later outcomes (and associated economic benefits) are related to the outcomes that are targeted and currently monitored by the Rainbow Club. In practice, the Rainbow Club would probably need to rely on the cooperation of schools to obtain this type of information.

Introduction

Action for Refugees in Lewisham (AFRIL) works to relieve poverty and isolation amongst refugees and asylum seekers in Lewisham by advancing their education, and providing services to improve social integration. They currently provide several services including English as a Second Language (ESOL) classes, The Rainbow Club, Advice Services, Monthly Sunday Tea, and Support for Destitute Families.

This report looks at the impact of the Rainbow Club, which is a Saturday school that provides refugee children aged 4-11 with extra support to help improve their writing, literacy and numeracy skills, and increase their confidence and wellbeing. The report:

- Describes the Rainbow Club's activities and outputs
- Assesses the outcomes data currently collected by AFRIL
- Identifies potential sources of economic and social benefits
- Sets out recommendations for additional data collection

As explained below, the evidence currently collected is not sufficient to reliably assess the impact of the Rainbow Club. However, we have provided some 'back of the envelope' figures to illustrate the potential maximum value of these benefits. **These figures are illustrative rather than definitive, and further evidence on the impact of the Club would be needed** to provide a robust estimate of associated benefits

The Rainbow Club: Aims and Objectives

The Rainbow Club is a supplementary Saturday school that was set up after extensive consultation with the local community and other local voluntary & statutory service providers, and which focuses on children aged 4-11. It is divided into Reception, Key Stage 1 (Starfruit) and Key Stage 2 (Mango). The curriculum focus is on numeracy, literacy, music, art, and sports. All teaching is designed to improve children's ability to integrate successfully in the community and improve their self confidence. The service prioritises refugees and asylum seekers in the borough of Lewisham, and those children not yet in mainstream schools.

2007
AFRIL and Rainbow Club Founded

2008
Rainbow Club enrols 42 students in first year

2010
AFRIL enrols 30 students in Rainbow Club

2011
Increased enrolment to 50 children

2013
Increased enrolment to 65 children

2013
Begins to offer reception classes for children aged 4-5

2014
Increased enrolment to 70 children

2015
Dedicated head teacher employed

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The Rainbow Club: Activities and Outputs

The Rainbow Club plays an important role in helping to increase the educational attainment and social integration of refugee children in Lewisham. The curriculum is tailored to this demographic and designed with the **following goals:**

Increase academic attainment to improve access mainstream education	Improve the self-esteem, confidence, creativity and social skills of students	Improve the skills and wellbeing of parents.

Rainbow Club Sessions

Classes take place every Saturday during term time and involve a number of activities – the table below shows the average number of hours per child spent on certain activities during the last academic year.

Activity per child 2016/17 (hours)	Breakfast and Morning Learning	Literacy and Numeracy Lessons	Guided Reading/ Story Time	Outdoor Break/ Playtime	Fruit Break	Sport	Art	Group Music Lessons	Instrument Specific Lessons
Reception	7.75	24	14.5	13			7.25	7.25	
Star Fruit Class	7.75	31	10	10	2.2	9.75	14	12	
Mango Class	7.75	42	5.15	10	5.15	9.85	13	14	14

Rainbow Club also run a number of extracurricular activities, including field trips (museum of London, Royal Maritime Museum, Horniman Museum, Southwark Library), workshops and end of term events (such as performances, presenting work, awards).

Teaching follows the national curriculum and where possible children are assessed using **nationally recognised assessment methods** such as the **Oxford Writing Criterion Scale** used to assess written English.

Data Availability and Limitations

Rainbow Club have been previously advised by Regeneris on the importance of comprehensive, consistent and timely data and how to improve the collection of relevant data. As a result, new methods of data collection are being explored and Rainbow Club is collecting more data on a regular basis than in previous years.

AFRIL currently collect a range of data on outcomes for children who attend the Rainbow Club:

- **Oxford OWL*** – nationally recognised reading and literacy assessment which was taken by all year groups. This assessment was carried out at least twice during the academic.
- **Numeracy tests** - as with literacy; children are assessed multiple times throughout the year against national curriculum standards. In 2017, the assessments were run for all year groups except reception.
- **Wellbeing of children:** children were assessed by their teachers twice in 2016/17 using the Strengths & Difficulties Questionnaire (SDQ). Pupils also completed a self-assessment survey once in 2016/17 that asked about both their academic and social development throughout the year.
- **Attendance data** – data collected by Rainbow Club on a weekly basis.
- **Volunteering data** – this is based on volunteer attendance and training received throughout the academic year.

The following slides detail the available evidence on outcomes in relation to children who attended the Club and volunteer staff. It should be noted that there are a number of limitations with the data which include:

- **Availability of primary data**: whilst improvements have been made in the collection of data within Rainbow Club, there are still apparent gaps. Data over 2016/17 academic year is more comprehensive that in recent years, therefore 2016/17 can only be looked at in isolation. Economic impacts relating to parents could have also been assessed however the necessary data was not collected during 2016/17.

- **Counterfactual analysis**: attempts were made to access academic data (via the DfE National Pupil Database) for both refugee and non-refugee children who do not attend supplementary school. Data is restricted to academic staff and education providers and Rainbow Club were unable to access this information.

Potential benefits of the Rainbow Club: wellbeing of children

Strength & Difficulties Questionnaire (SDQ)

Throughout the year **pupils are assessed by their teachers on a number of behaviours which include; conduct problems, emotional problems, hyperactivity, peer problems and prosocial behaviour,** the assessments are carried out at least twice during the academic year[+]. Existing studies from the HACT Social Value Bank show that supplementary education helps build children's confidence and provide additional support and aid children from BAME groups to integrate. **The end of year pupil self assessment has indicated that the confidence and emotional wellbeing of children who attended the Rainbow Club improved.**

During 2016/17 pupils were monitored throughout the year and analysis of these assessments has shown the following;

Reception

Star Fruit Class (Infants)

Mango Class (Juniors)

Rainbow Club

Overall (All ages)

67%

5%

14%

26%

... of pupils showed an improvement in their overall SDQ scores

Pupil Self-Assessment*	"Safe and Happy"	"Teacher helps with problems & worries"	"They learn a lot in class"	"They improved in English, Maths and Art"
Rainbow Club pupils felt......	**Over 85% agreed**	**90% agreed**	**95% agreed**	**Over 90% agreed**

^Based on National Curriculum expected levels in each primary year group   *Based on pupil end of year assessment

[+]Most pupils are assessed twice however this can depend on individual pupil attendance throughout the year
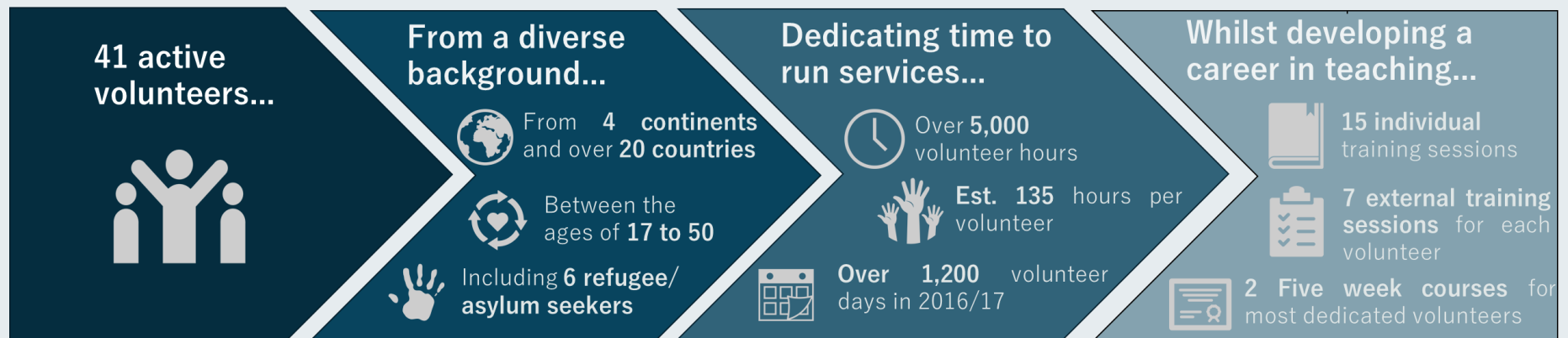
Potential benefits of the Rainbow Club: benefits for volunteers

The Rainbow Club depends on the participation of regular volunteers to deliver services within budget, including teaching, running activities and managing operations.

Volunteers can also gain experience and skills useful for developing their future careers, particularly in teaching (see diagram below).

In the last academic year (2016-17) volunteers received external training sessions on working with autism, first aid, teaching and learning and safeguarding. Two volunteers who are both asylum seekers were also placed on two 5 week courses on working with children with autism and safeguarding.

In total, there are 41 active volunteers regularly volunteering at the Rainbow Club, each of whom receive at least 7 external training sessions during the academic year.

| 41 active volunteers...	From a diverse background...	Dedicating time to run services...	Whilst developing a career in teaching...
	From **4 continents** and over **20 countries**	Over **5,000** volunteer hours	**15 individual** training sessions
	Between the ages of **17 to 50**	Est. **135** hours per volunteer	**7 external training sessions** for each volunteer
	Including **6 refugee/ asylum seekers**	Over **1,200** volunteer days in 2016/17	**2 Five week courses** for most dedicated volunteers

Potential benefits of the Rainbow Club: school attendance

It is also possible that **the Rainbow Club might reduce truancy, increasing school attendance, thereby potentially providing savings thorough avoided costs of public services ('fiscal savings')**. Truancy comes at a cost to the Government due to extra pressures on health, crime and social services. There is also a cost to the individual based on loss of earnings later in life however the impact on potential earnings has already been assessed.

An Education Development Trust* study looking at the impact of supplementary schools on BME children has shown that supplementary education reduces absenteeism at school. The study showed that regular school attendance amongst supplementary education pupils increased from **80% to 95% within 1 year**, following attendance at a supplementary school.
Whilst this suggests that participation in the Rainbow Club could potentially increase school attendance there is no direct evidence of this impact. This would require data on the attendance of children who attend the club compared to a similar group of children who do not (taking into account the possibility that they may attend a different supplementary out-of-school programme). The illustrative example below is based on the assumption that the club increases attendance from 80% to 95%.

Illustrative example based on 66 Rainbow Club pupils

80% Regular
Attendance

20% Regular
Absenteeism
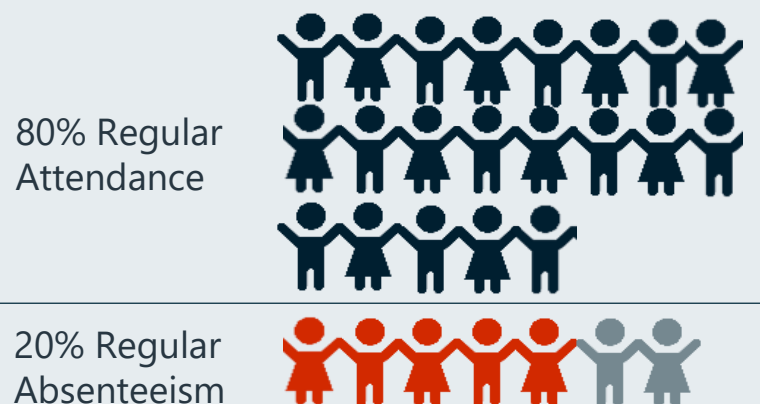
80% regular school attendance = 52 pupils
(Based on average attendance for BME pupils who do not attend supplementary school)

Additional attendance = 10 pupils
(Based on increase to 95% attendance for BME children who do attend supplementary education)

*Education Development Trust, 2005; Raising Achievement Among KS2 Bangladeshi Children in Small Heath: An Action Research Project / ^ New Philanthropy Capital, 2005; Misspent Youth, The costs of truancy and exclusion: A guide for donors and funders.

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Potential benefits of the Rainbow Club: academic attainment

If the Rainbow Club can improve participants' academic performance this may result in economic benefits in he form of higher wages. For example, ONS data suggest that the average wage someone with at least one GCSE can expect is roughly £4,000 per year higher than the wage achieved by someone with no GCSEs.

Pupils between Years 1 to 7 are assessed against national standards on either literacy or numeracy (these results are used to assess economic impact). **A number of indicators suggest that Rainbow Club sessions have improved children's literacy and numeracy skills**.

Literacy:
• **... 86% of all pupils improved** their Writing & Literacy Skills during 2016/17...
• ...with **all Reception** and **Year 4**, **5** and **6** pupils improving.
• A **reduction** in the proportion of pupils **"not yet working at year group standard"** from **50% to 25%** over the course of 2016-2017.
• **Almost 85% of all pupils** achieved a score of '**Secure**' or '**Advanced**' in the last academic year, thereby demonstrating that they are working at level expected for their age.

Numeracy:
• Based on numeracy tests throughout 2016/17; **92% of pupils** in **Years 1, 2** and **3** were **achieving** the **expected level** of **numeracy** at the end of the year...
• ...with almost **1/5 of pupils achieving** a level of numeracy '**beyond expectation'.**
• ...**50% of Year 4,5** and **6 pupils were achieving the expected level** of **numeracy** at the end of the year...
• ...with almost **20% of pupils achieving** a level of numeracy '**beyond expectation'**

It is important to note, however, that the **linkage between improved literacy** and **numeracy in years 1 to 7 and GCSE attainment is uncertain.**

What is the potential magnitude of benefits in monetary terms?

As noted earlier, there is insufficient evidence currently available to reliably assess the value of benefits from the Rainbow Club. However, we have provided some 'back of the envelope' figures of the potential maximum value of these benefits based on the assumption that, absent the Rainbow Club, no programme participants or volunteers would have undertaken any other activity or shown any improvement in each of the areas covered. **These figures should be regarded as illustrative rather than definitive**, and are likely to overestimate (potentially significantly) the impact of the Rainbow Club. Further evidence on the impact of the club would be needed to provide a reliable estimate of associated benefits. Further details on the approach used to calculate these estimates can be found in the Annex.

Social & Wellbeing (Immediate)

Improvements in wellbeing of volunteers of **c. £10k to £125k** per annum

Value of training for volunteers **c. £5k to £60k** per annum

Improvement in pupil confidence **c. £10k to £140k** per annum

Relief from anxiety & depression amongst pupils **c. £30k to £270k** per annum
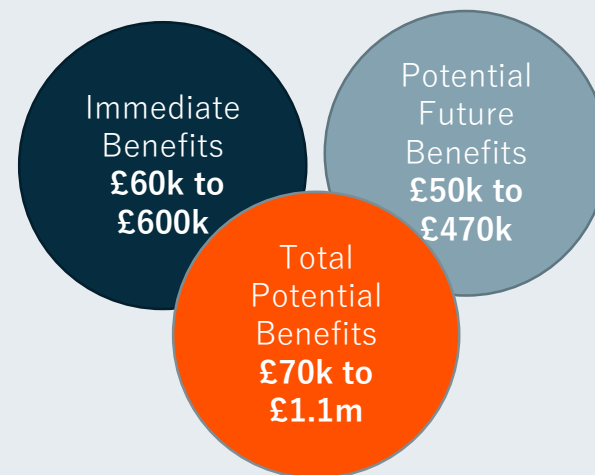
Public Sector (Immediate)

Savings to the Treasury of **c. £3k to £14k** per annum

Academic Performance (Future)

Future pupil earnings uplift as a result of higher educational attainment: **c. £50k - £460k** per annum

Immediate Benefits **£60k to £600k**

Potential Future Benefits **£50k to £470k**

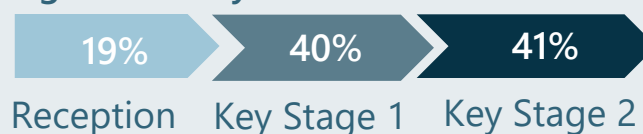Total Potential Benefits **£70k to £1.1m**

Annex

Annex – The Rainbow Club: Demographics and Location

Who? The Rainbow Club provides **teaching and support** for **refugee children** in Lewisham

66 Refugee Children (2017)

Aged 4 to 11 years old

19% Reception
40% Key Stage 1
41% Key Stage 2

From seven Nationalities...

...83% from Africa, 17% from China

Where? Intervention is important given Lewisham's **diverse demographic** and **local deprivation**

15th **most ethnically diverse** local authority in England..

8,000 Non-UK national residents issued New National insurance numbers in 2011

Top 20 **most deprived** local authority for **income deprivation**. With 30% of children living in income deprived households.

How? Teaching is designed to improve children's ability to **integrate successfully** in the community

English
Writing
Play
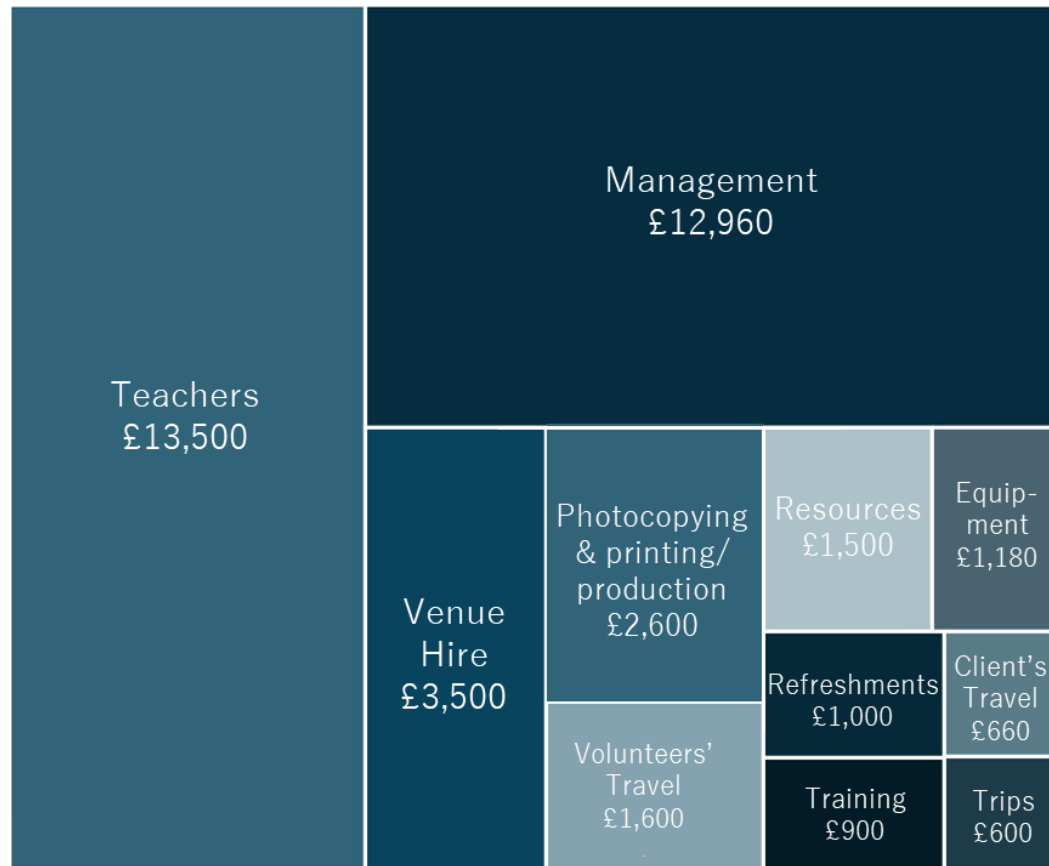**Support**
Art
Drama
Maths
Sport
Integration

Annex – The Rainbow Club: Financials

Budget

The Rainbow Club's budget for the 2016-17 academic year was **£40,000**, of which the majority was spent on teaching and management (see breakdown below).

Teachers £13,500

Management £12,960

Venue Hire £3,500

Photocopying & printing/ production £2,600

Resources £1,500

Equipment £1,180

Refreshments £1,000

Client's Travel £660

Volunteers' Travel £1,600

Training £900

Trips £600

Funding

The Rainbow Club depends entirely on a combination of public sector funding, private trust funding and general donations to deliver services (see below for funders). Total funding received relating to the 2016-17 academic year was **£40,000.**

BBC Children in Need **£21,000**

people's health trust **£6,000**

ZURICH FOUNDATION **£5,000**

The Mercer's Charitable Foundation **£5,000**

General Donations **£2,000**

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Annex – The Rainbow Club: Activities and Outputs for Parents

Parent support

Support, advice, and networks are offered to parents to help promote their family's integration into the local community. The Rainbow Club hosted a number of events for parents during the academic year 2016-2017 – for example:

Parents Forums

Seven **1.5 hr discussion sessions** focussed on problems faced by parents. On average, 20 parents attended each session.

Parents Workshops

Five **2 hr arts and crafts workshops** to improve their communication and self-confidence, release stress, focus on their well-being whilst making friends and learning from others.

End of term celebrations

Three **1.5 hour events** attended by parents celebrating the work of the students.

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Annex – The Rainbow Club: Development Plan

The Rainbow Club have the following aspiration to expand and develop their programme over the next **five years:**

- Cater for expanding needs by moving premises. In the new location teachers will have access to all the facilities and resources as mainstream schools. The primary aim at the Rainbow Club is delivering an outstanding educational experience to students every Saturday and this move will enable the organisation to do this.
- Embed high quality teaching practices and work towards the Gold Accreditation.
- Partner more closely with local schools and use position to advocate for the rights of refugees in the local area.
- Introduce new technologies and teaching methods to continue to improve provision for students with English as an Additional Language and Special Educational Needs.
- Seek new funding opportunities to ensure the future sustainability of the Rainbow Club and the education we provide.

Annex – Methodology used to obtain illustrative maximum benefits (1)

The table below sets out the data sources and methodology used to obtain the illustrative potential maximum benefits of the Rainbow Club.

Benefit	Data source(s)	Methodology
Emotional and Well-being of participants	Survey of participants of the Rainbow Club HACT Social Value Bank estimates of improvements in wellbeing.	Multiply the HACT estimates by the number of surveyed Rainbow Club participants that reported an improvement in confidence. Sensitivities obtained by varying the number of positive respondents.
Volunteering	Data from the Rainbow Club regarding the number of volunteers involved. HACT Social Value Bank estimates of the value of volunteering (in terms of wellbeing and training).	Multiply the HACT estimate by the number of Rainbow Club volunteers. Sensitives obtained by varying the total number of "regular" volunteers.

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Annex – Methodology used to obtain illustrative maximum benefits (2)

The table below sets out the data sources and methodology used to obtain the illustrative potential maximum benefits of the Rainbow Club.

Benefit	Data source(s)	Methodology
Fiscal savings	New Philanthropy Capital estimate of the cost of truancy. Education Development Trust research regarding the impact of school attendance on performance.	Multiply the estimated cost of truancy by an assumed increase in regular school attendance as a result of participating in the Rainbow Club. Sensitives obtained by varying the assumed uplift in attendance.
Academic Performance	ONS data regarding average wages by qualification level. Survey of participants of Rainbow Club	Multiply the difference in average annual wages for a person with no qualifications and a person with GCSEs by an assumed number of Rainbow Club participants that obtain GCSEs who would not have done otherwise. Sensitivities obtained by varying the assumed number of Rainbow Club participants that now obtain GCSEs.