



ethical partnership

Installation of Air Source Heat Pumps

Harris Primary Academy
Coleraine Park

Design and Access Statement

Ethical Planning (North East) Ltd.

November 2022

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VERSION	FILENAME	DATE	AUTHOR	APPROVED BY
V1.1	492_CP_ASHP_DAS	22.11.22	SS	MAC

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1. Introduction

1.1. Applicant

1.1.1. The applicant is the Harris Federation.

1.2. Agent

1.2.1. The agent for this planning application is Ethical Partnership.

1.3. Purpose of this Statement

1.3.1. Ethical Partnership has been commissioned to prepare and submit this planning application on behalf of SSE Energy Solutions and as part of this to prepare this design and access statement in support of the application.

1.3.2. The purpose of this Design and Access statement is to describe the proposed development, and then to summarise the proposals, design intentions, and how the proposals accord with the relevant national and local planning policies.

1.4. The Proposed Development

1.4.1. The proposed development is the installation of an Air Source Heat Pump (ASHP) unit to supply 57% of the heating requirements of Harris Primary Academy Coleraine Park. Acoustic mitigation has been specified to the plant area in the form of a 3.5m high timber acoustic fence and gate (planed tongue and grooved board with capping rail).

1.5. Energy Goals

1.5.1. The Mayor of London is committed to London becoming a zero-carbon city by 2050. This will require reduction of all greenhouse gases, of which carbon dioxide is the most prominent. London's homes and workplaces are responsible for producing approximately 78 per cent of its greenhouse gas emissions¹. To meet the zero-carbon target, an on-site reduction of at least 35 per cent beyond the baseline of Part L of the current Building Regulations is required. The proposed ASHP will help London meet this goal and reduce the on-site reduction of carbon emissions.

1.5.2. The Vision Statement for Haringey and their Strategic Outcomes, within Haringey's Local Plan Strategic Policies 2013 – 2026, 2017, states how the area has an ambition to minimise the borough's contribution to climate change and support sustainable communities by encouraging energy efficiency and using renewable

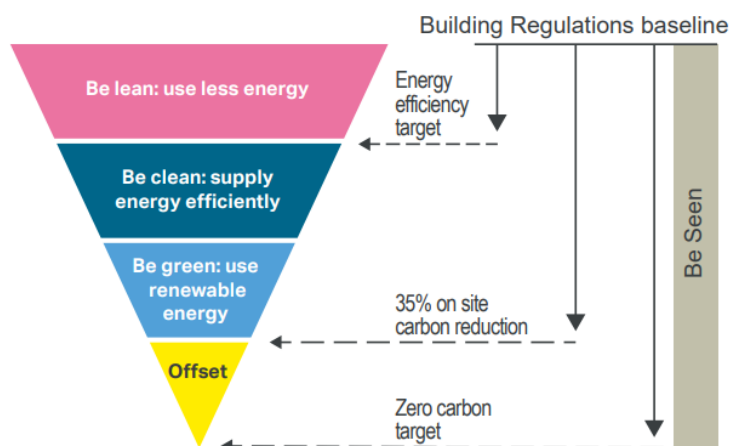


Figure 1.1 Energy hierarchy and associated targets. Source: Greater London Authority

¹ Greater London Authority. *The London Plan 2021*. London, 2021.

1.5.3. energy. The Strategic Outcome, *An Environmentally Sustainable Future*, demonstrates that the borough will work towards this by responding to climate change and managing environmental resources more effectively.

1.5.4. As demonstrated in Table 1 Sensitivity Analysis, the installation of the proposed ASHP will allow for the displacement of 57% of the fossil fuel that would otherwise be emitted while heating the school. This development can be used as an example of how education providers can support the borough in achieving this goal and getting closer to becoming carbon neutral.

Table 1 Sensitivity Analysis	
ASHP Supplied Energy	176,111 kWh
ASHP Displaced Fuel	234,815 kWh
ASHP Elec. consumption	57,065 kWh
Post-retrofit boilers fuel consumption	174,461 kWh
% of fossil fuel displaced	57%

1.6. Air Source Heat Pumps

- 1.6.1. Air source heat pumps (ASHP) absorb heat from the outside air to heat buildings and hot water. They can still extract heat when air temperatures are as low as -15°C. Air to water S-ASX heat pumps satisfy the heating and hot water production requirements of installations of medium and large size. Air source heat pumps need electricity to run; however, as they are extracting renewable heat from the environment, the heat output is greater than the electricity input. This makes them an energy efficient method of heating. The possibility to produce up to 65c temperatures makes these units particularly suitable to radiators circuits as well as to fan coil and under floor heating circuits. ASHP are considered to have a long lifespan of 50+ years and have higher safety and lower maintenance requirements than standard combustion heat sources.
- 1.6.2. The refrigerant circuit, contained in a box separate from the air flow to simplify the maintenance operations, is equipped with two scroll compressors mounted on damper supports, brazed plate heat exchangers, electronic expansion valve, reverse cycle valve, axial fans, finned coil realized with copper pipes and aluminium fins. The circuit is protected by high- and low-pressure switches and flow switches on the plate heat exchanger.
- 1.6.3. The compressors are arranged in tandem on a single refrigerant circuit and allow the capacity modulation according to the plant requests to guarantee a high seasonal efficiency. Both the compressors are equipped with vapour and liquid injection and are placed on an economized refrigerant circuit with plate heat exchanger and electronic expansion valve dedicated to the injection.
- 1.6.4. The plate heat exchanger and all the hydraulic pipes are thermally insulated to avoid condensate generation and reduce thermal losses. The axial fans, equipped with electronic control of the rotational speed, guarantee high efficiencies in all the operating conditions and the possibility to reduce the noise level during the night.

1.7. Statement of Justification

- 1.7.1. The installation of an AHSP falls under Part 14 Class G permitted development rights. Class C is described as the following “installation or alteration etc of air source heat pumps on domestic premises.” The development under this legislation are as follows:

G. The installation, alteration or replacement of a microgeneration air source heat pump—

(a) on a dwellinghouse or a block of flats; or

(b) within the curtilage of a dwellinghouse or a block of flats, including on a building within that curtilage.

1.7.2. The conditions under this legislation are as follows:

G.3 Development is permitted by Class G subject to the following conditions—

(a) the air source heat pump is used solely for heating purposes;

(b) the air source heat pump is, so far as practicable, sited so as to minimise its effect on the external appearance of the building;

(c) the air source heat pump is, so far as practicable, sited so as to minimise its effect on the amenity of the area; and

(d) the air source heat pump is removed as soon as reasonably practicable when no longer needed.

1.7.3. Planning is required for this development because the proposed air source heat pump is proposed to be installed to support the heating needs of a school, not a domestic premises². As such it does not benefit from Permitted Development rights according to the 2015 GPDO.

² The Town and Country Planning (General Permitted Development) (England) Order 2015

2. Site Description & Surroundings

2.1. Introduction

2.1.1. This section describes the existing site and adjacent land uses.

2.2. Harris Primary Academy Coleraine Park

2.2.1. The Harris Primary Academy Coleraine Park opened in 2012 on an existing school site. It is one of the 50 academies within the Harris Federation, sponsored by Lord Harris of Peckham.

2.3. Site Location

2.3.1. The site is located 33-1 Glendish Road, London, N17 9XT within the administrative boundary of the London Borough of Haringey. The site is set out Figure 2.1 below.

2.3.2. The site is accessed from Halefield Road to the south, both by car and foot as part of Harris Primary Academy Coleraine Park grounds.



Figure 2.1 Site Location Plan

2.4. Boundaries

2.4.1. The boundaries of the proposed site are formed by:

- Existing academy building to the north;

- Fencing of the play area to the east;
- Halefield Road to the south; and
- Residential properties to the west.

2.5. Surroundings

- 2.5.1. The immediate surrounding area to the north and east is formed by the school grounds of Harris Primary Academy Coleraine Park. Beyond the school grounds the area is comprised of residential properties and public transport links within the Haringey Borough of London.

2.6. Existing uses

- 2.6.1. The legal status of the site is a school, Class F1(a) Provision of education.

2.7. Planning History

- 2.7.1. The below is a summary of the planning history of the site.

Reference	Description	Decision	Date
HGY/2015/2071	Extension of a new entrance lobby to the existing south elevation	Grant permission	10/09/2015

3. The Proposed Development

3.1. Description of the Proposed Development

- 3.1.1. The proposed development is the installation of an Air Source Heat Pump (ASHP) unit adjacent to the existing school building.
- 3.1.2. The ASHP will be used to meet 57% of the yearly heating requirements for Harris Primary Academy Coleraine Park. The heat pumps will operate in conjunction with thermal storage vessels installed in the school building and existing heating system. The system will be operational all year-round during day-time hours ready to meet the heating demand. Timber acoustic fencing measuring 3.5m high with an acoustic gate, planed tongue and grooved boards with capping rail will surround the unit to the east, south and west elevations. The gate to Halefield Road will allow maintenance access to the unit.

3.2. Amount

- 3.2.1. The area of land to be used for the installation of the ASHP will be approximately 9m² while the area of the entirety of the site will be 0.01 hectare.

3.3. Scale

- 3.3.1. The boundaries of the existing storage area will not be altered.

3.4. Appearance, Landscaping, & Boundary Treatment

- 3.4.1. Following the installation of the associated pipework any material disturbed during construction will be replaced like-for-like.
- 3.4.2. The features to be introduced to the existing appearance of the site will include timber acoustic fencing to enclose the unit, a hard level base, an ASHP unit with a supporting structure and lateral panels made of galvanized and painted sheet steel to guarantee good resistance to atmospheric agents. Accessibility to internal parts of the ASHP is possible by removing the grooved boards.



Figure 3.1 Manufacturer's visualisation of the ASHP series.

3.5. Layout

- 3.5.1. The location of the ASHP unit has been located strategically within the site boundary to minimise visibility and noise. The unit will be located adjacent to the existing academy building within the school grounds; the room that the ASHP will be located is adjacent to the academy kitchen. The unit itself will be bound to the existing building, while the area to the south, east and west will continue to act as a storage area. Limited piping will be installed between the unit and the building to allow for connection to the existing heating network.

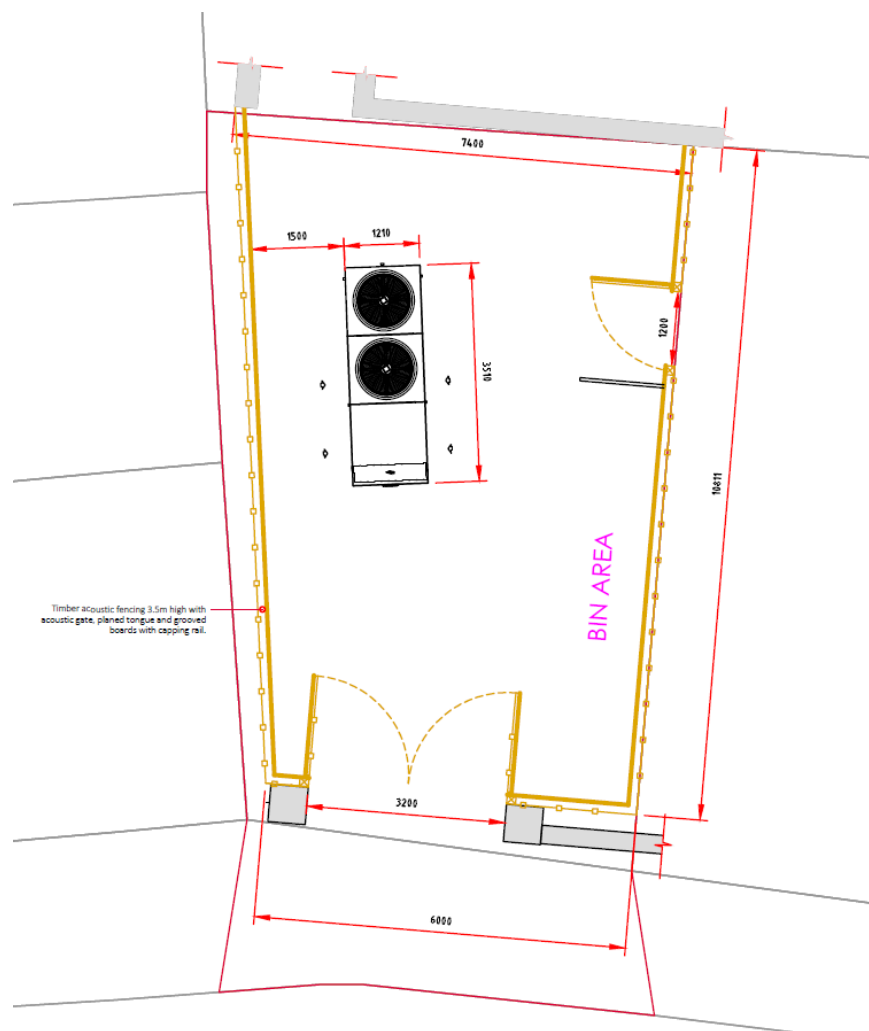


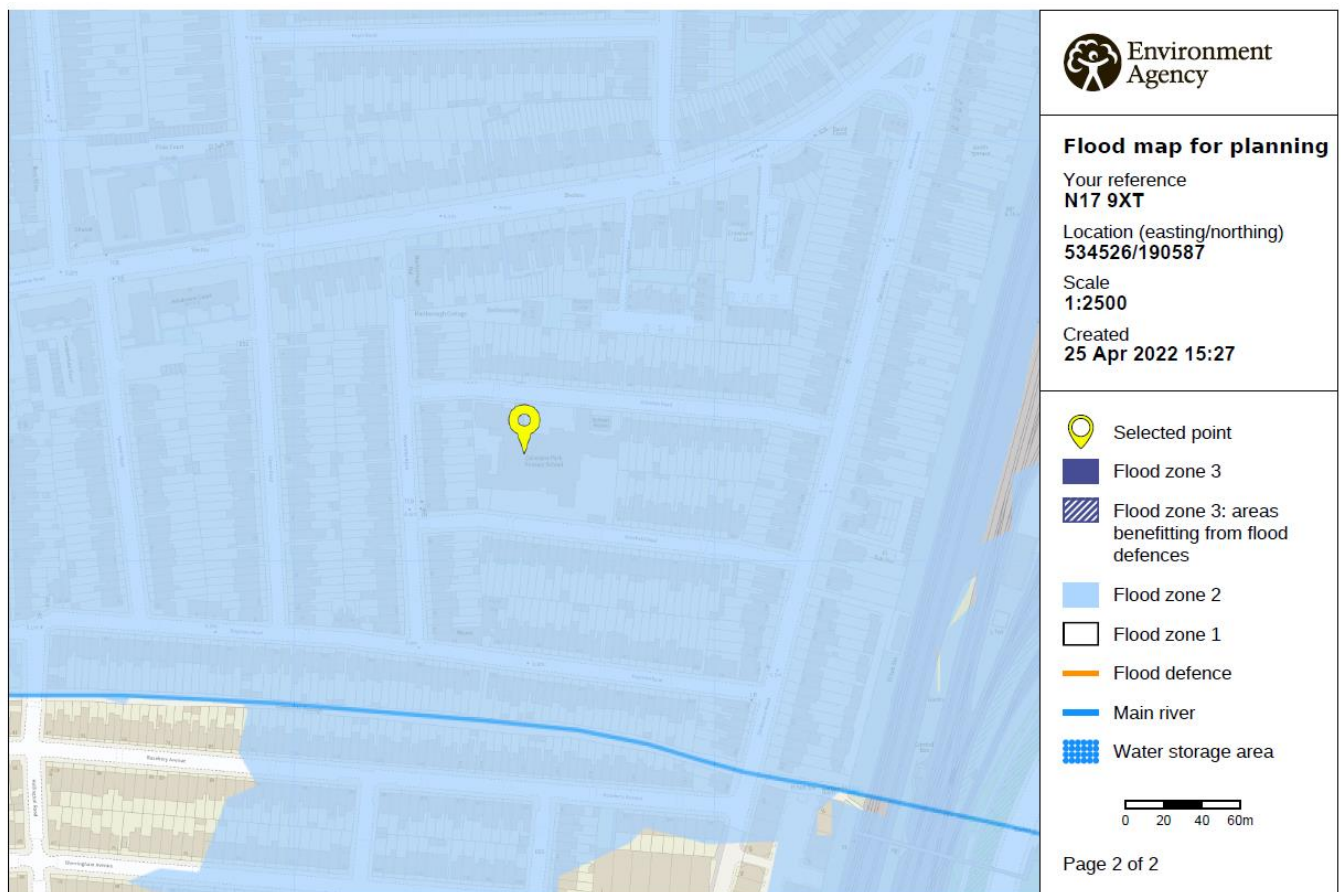
Figure 3.2 Proposed Layout of ASHP

3.6. Access and Approach

- 3.6.1. The site will be accessed via the existing access to the academy grounds from Halefield Road. The proposal will not alter the existing access to the academy. The unit will be accessed via a gate within the proposed fencing. The fencing will protect the unit and ensure access is limited to maintenance personnel and emergency services.

3.7. Flood Risk and Drainage Strategy

- 3.7.1. The Environment Agency Flood map for planning shows river and sea flooding data for use in development planning and flood risk assessments. The 1:2500 map shows that the site and immediate area are in Flood Zone 2 (medium probability of flooding). It is considered that the proposal will not increase floor risk to the wider catchment area. As the development is smaller than 1 hectare and not affected by other sources of flooding, a Flood Risk Assessment is not required and has not been produced for this application.



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Figure 3.3 Flood Map at 1:2500 - Flood Zone 2

3.8. Heritage

- 3.8.1. There are no heritage assets within the site or in the immediate surrounding area.

3.9. Noise

- 3.9.1. The proposed ASHP unit is designed for minimal acoustic disturbance and includes integral dampers to reduce the level of noise. There will be some noise through the construction and installation process. The BS4142 Noise Impact Assessment (NIA) produced by NJD has found that the rating noise level post-installation of the ASHP is expected to be no more than 2dB above the existing background noise levels. Noise from the plant is expected to result in a low impact based on the installation of acoustic fencing around the perimeter highlighted in figure 1 of the submitted NIA. As such, the noise is unlikely to be perceptible, resulting in a negligible impact and should not result in a perceived change in the quality of life for the receptors. For more information, please see the NIA submitted as part of this application.

3.10. Air Quality

- 3.10.1. The use of ASHP will make a significant low carbon contribution to the development.
- 3.10.2. As the carbon intensity of electricity is falling, with a greater proportion of the capacity provided by renewable sources, ASHP will look increasingly favourable compared to mains gas and importantly put the building on a pathway to zero carbon.
- 3.10.3. Air source heat pumps (ASHP) absorb heat from the outside air to heat buildings and hot water. Heat pumps use electricity but get most of their heat free from the outside air. As such, the CO₂ emissions of the heat produced are very small at around 78g CO₂/kWh while CO₂ emissions for Gas heating are about 260g CO₂/kWh. The resulting difference is that gas heating produced more than three times as much CO₂ as heat pumps, according to National grid data on emissions from electricity generation.
- 3.10.4. As ASHP feature no combustion, all local NO_x and SO_x emissions are removed, which helps to maintain local air quality.

4. Planning Policy Context

4.1. Introduction

- 4.1.1. This section outlines the principal local and national planning policies which pertain to this planning application. The policies which pertain to this application are then assessed against the proposal.

4.2. National Planning Policy Framework (NPPF) (2021)

- 4.2.1. The purpose of the Framework is to contribute to the achievement of sustainable development and advises that planning serves three roles: an economic role, a social role, and an environmental role. The roles should not be undertaken in isolation as they are mutually dependent, and the planning system should play an active role in guiding development to sustainable locations.
- 4.2.2. Planning law requires that applications for planning permission be determined in accordance with the development plan unless material considerations indicate otherwise. The National Planning Policy Framework must be considered in preparing the development plan and is a material consideration in planning decisions. Planning policies and decisions must also reflect relevant international obligations and statutory requirements.
- 4.2.3. The NPPF states at paragraph 7 that the purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- 4.2.4. Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

- 4.2.5. At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, so that sustainable development is pursued in a positive way.
- 4.2.6. With reference to paragraph 11 of the NPPF, it is important to note that for decision-taking this means Approving development proposals that accord with an up-to-date development plan without delay; or

where there are no relevant development plan policies, or the policies which are most important are out-of-date, granting permission unless:

- the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or
- any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.

4.2.7. Further advice on decision-taking which is of relevance to the current scheme is provided at paragraph 38 of the Framework.

4.2.8. Local planning authorities should approach decisions on proposed development in a positive and creative way. They should use the full range of planning tools available and work proactively with applicants to secure developments that will improve the economic, social, and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible.

4.2.9. The early engagement evoked by the NPPF has been undertaken in a bid to assist in the efficiency and effectiveness of the determination of this planning application; paragraphs 39 to 46 of the NPPF highlight the importance of pre-application engagement.

4.2.10. Paragraph 119 of Section 11 Making effective use of land encourages an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Paragraph 120 goes on to encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains and to recognise that some undeveloped land can perform many functions.

4.2.11. Paragraph 123 of Section 11 states:

Local planning authorities should also take a positive approach to applications for alternative uses of land which is currently developed but not allocated for a specific purpose in plans, where this would help to meet identified development needs. In particular, they should support proposals to: a) use retail and employment land for homes in areas of high housing demand, provided this would not undermine key economic sectors or sites or the vitality and viability of town centres, and would be compatible with other policies in this Framework; and b) make more effective use of sites that provide community services such as schools and hospitals, provided this maintains or improves the quality of service provision and access to open space.

4.2.12. Paragraph 155 of Section 14 Meeting the Challenge of Climate Change states that local planning authorities should:

a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);

b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and.

c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.

4.2.13. Paragraph 158 states:

When determining planning applications for renewable and low carbon development, local planning authorities should: a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for colocating potential heat customers and suppliers.

4.3. Local Planning Policy

- 4.3.1. The Local Plan is comprised of a number of documents which are pertinent to the assessment of this planning application. The relevant documents, and policies contained within them, have been identified and are detailed in the following sections.
- 4.3.2. The development plan of Haringey London Borough Council is currently made up of the Strategic Policies, Development Management Policies, Site Allocations and Tottenham Area Action Plan, alongside the London Plan.

Development Management DPD (2017)

- Policy DM1: Delivering High Quality Design
- Policy DM21 – Sustainable Design, Layout and Construction
- Policy DM23 – Environmental Protection

Haringey's Local Plan Strategic Policies (2013-2026, 2013)

- Policy SP0 – Presumption in Favour of Sustainable Development
- Policy SP4 – Working towards a Low Carbon Haringey

The London Plan (2021)

- Policy GG2 – Making the best use of land
- Policy D4 – Delivering good design
- Policy D13 – Agent of Change
- Policy D14 – Noise
- Policy SI 1 – Improving air quality
- Policy SI 2 – Minimising greenhouse gas emissions

Development Management DPD (2017)

Policy DM1: Delivering High Quality Design

Haringey Development Charter

A All new development and changes of use must achieve a high standard of design and contribute to the distinctive character and amenity of the local area. The Council will support design-led development proposals which meet the following criteria:

- a Relate positively to neighbouring structures, new or old, to create a harmonious whole;*
- b Make a positive contribution to a place, improving the character and quality of an area;*
- c Confidently address feedback from local consultation;*
- d Demonstrate how the quality of the development will be secured when it is built;*
- and*
- e Are inclusive and incorporate sustainable design and construction principles. Design Standards Character of development*

B Development proposals should relate positively to their locality, having regard to:

- a Building heights;*
- b Form, scale & massing prevailing around the site;*
- c Urban grain, and the framework of routes and spaces connecting locally and more widely;*
- d Maintaining a sense of enclosure and, where appropriate, following existing building lines;*
- e Rhythm of any neighbouring or local regular plot and building widths;*
- f Active, lively frontages to the public realm; and*
- g Distinctive local architectural styles, detailing and materials.*

Landscaping

C Development proposals shall demonstrate how the landscaping and planting are integrated into the development as a whole. The Council will expect development proposals to respond to:

- a Landform;*
- b Levels, slopes and the fall of the ground;*
- c Trees on and close to the site;*
- d Landscaped boundary and treatments; and*
- e Any other significant biodiversity (including prioritising native over invasive species) on or close to the site.*

Privacy and amenity

D Development proposals must ensure a high standard of privacy and amenity for the development's users and neighbours. The Council will support proposals that:

a Provide appropriate sunlight, daylight and open aspects (including private amenity space where required) to all parts of the development and adjacent buildings and land;

b Provide an appropriate amount of privacy to their residents and neighbouring properties to avoid overlooking and loss of privacy detrimental to the amenity of neighbouring residents and the residents of the development; and

*c **Address issues of vibration, noise, fumes, odour, light pollution and microclimatic conditions likely to arise from the use and activities of the development.***

Policy DM21 - Sustainable Design, Layout and Construction – Local Plan

- A. All new development, including building and landscape works, will be expected to consider and implement sustainable design, layout and construction techniques. Proposals should: a Apply the energy hierarchy to minimise energy use in order to meet, and if possible exceed, minimum carbon dioxide reduction requirements; b Apply the cooling hierarchy to reduce the potential for overheating and limit reliance on mechanical air conditioning systems; c Maximise opportunities to enhance biodiversity on-site, including through appropriate landscaping, Sustainable Drainage Systems, living roofs and green walls d Wherever possible, use building materials with high environmental performance ratings; and e Seek opportunities for locally sourced labour.*
- B. The Council will support appropriate measures to sustainably retrofit existing homes and non-residential buildings.*
- C. Proposals that fail to demonstrate adequate consideration for sustainable design, layout and construction techniques will be resisted.*
- D. Consideration will be given to the use of carbon offset payments, to be secured by planning obligations, where it can be demonstrated that proposals are unable to meet carbon dioxide emission reduction targets on-site.*

Policy DM23 - Environmental Protection – Local Plan

Air Quality

- A. All development proposals should consider air quality and be designed to: a Improve or mitigate the impact on air quality in the Borough; and b Improve or mitigate the impact on air quality for the occupiers of the building or users of the development.*
- B. Air quality assessments will be required for all major development and other development proposals, where appropriate.*
- C. Where necessary, adequate mitigation must be provided. Noise and Vibration*
- D. The Council will seek to ensure that new noise sensitive development is located away from existing or planned sources of noise pollution. Proposals for potentially noisy development must suitably demonstrate that measures will be implemented to mitigate its impact.*

- E. A noise assessment will be required to be submitted if the proposed development is a noise sensitive development, or an activity with the potential to generate noise. Light Pollution*
- F. Development proposals that include external lighting must mitigate potential adverse impacts from such lighting. Where appropriate, proposals will be required to submit details demonstrating that external lighting is:*
- a. Appropriate for its purpose in its setting;*
 - b. Designed to minimise and provide protection from glare and light spillage, particularly to sensitive receptors such as residential properties and natural habitats, including watercourses; and*
 - c. Energy efficient.*
- G. Proposals for new development will only be permitted where it is demonstrated that any risks associated with land contamination, including to human health and the environment, can be adequately addressed in order to make the development safe.*
- H. All proposals for new development on land which is known to be contaminated, or potentially contaminated, will be required to submit a preliminary assessment to identify the level and risk of contamination and, where appropriate, a risk management and remediation strategy.*

Hazardous Substances

- I. Proposals for development of new hazardous installations, or development of sites located within the vicinity of existing installations, will only be permitted where it is demonstrated that necessary safeguards are incorporated to ensure the development is safe.*

Haringey's Local Plan- Strategic Policies (2013-2026, 2013)

SPO - Presumption in Favour of Sustainable Development

When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework (NPPF). The Council will always work proactively with applicants to find solutions, which mean that proposals can be approved wherever possible and to secure development that improves the economic social and environmental conditions in Haringey. Planning applications that accord with the policies in Haringey's Local Plan (and, where relevant, with policies in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise. Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision, then the Council will grant permission unless material considerations indicate otherwise taking into account whether:

- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies of the NPPF taken as a whole;*
- or*

- *Specific policies in the NPPF indicate that development should be restricted.*

SP4 - Working towards a Low Carbon Haringey

Over the life time of the Local Plan, reducing energy use in buildings and working towards a low carbon borough will be one of the key challenges facing Haringey. The Council will promote the measures outlined below to reduce carbon emissions from new and existing buildings.

1. In line with London Plan policy, the Council will promote and require all new developments to take measures to reduce energy use and carbon emissions during design, construction and occupation, by incorporating the following measures:

a. From 2011 onwards, all new residential development will achieve a minimum 25% reduction in total (regulated) CO2 emissions in line with Code for Sustainable Homes Level 4 energy standards, and should aim to achieve Level 6. All new residential development shall be zero carbon from 2016 onwards; and

b. From 2011 onwards all new non-residential development shall be built to at least BREEAM “very good” standard and should aim to achieve BREEAM “excellent” or the current nationally agreed standard. All new non-residential development shall be zero carbon from 2019.

2. The Council will promote low- and zero-carbon energy generation through the following measures:

a. Requiring all developments to assess, identify and implement, where viable, site-wide and area-wide decentralised energy facilities including the potential to link into a wider network;

b. Establishing local networks of decentralised heat and energy facilities by requiring developers to prioritise connection to existing or planned networks where feasible;

c. Working with neighbouring boroughs and other partners to explore ways of implementing sub-regional decentralised energy networks including the potential in the Upper Lee Valley Opportunity Area; and

d. All new developments are required, where viable, to achieve a reduction in predicted carbon dioxide emissions of 20% from onsite renewable energy regeneration, which can include connections to local sources of decentralised Policy SP12 – Conservation – Local Plan renewable energy.

The Council shall ensure the conservation of the historic significance of Haringey’s heritage assets, their setting, and the wider historic environment. The borough’s heritage assets include Statutory Listed Buildings, Conservation Areas, Registered Parks and Gardens, Archaeological Priority Areas, and other locally important heritage assets such as Locally Listed Buildings, Local Historic Green Spaces and Sites of Industrial Heritage Interest. Where archaeological excavation is required, findings should be published, disseminated, and used as the basis for archaeological interpretation on site.

- *The Historic Environment should be used as the basis for heritage-led regeneration and as the basis for good design and positive change. Where possible, development should*

help increase accessibility to the historic environment. All development shall protect the Strategic view from Alexandra Palace to St Paul's Cathedral as protected in the London Mayoral "London View Management Framework" Revised SPG, July 2010, and key local views.

The London Plan (2021)

Policy GG2 - Making the best use of land

To create successful sustainable mixed-use places that make the best use of land, those involved in planning and development must:

A enable the development of brownfield land, particularly in Opportunity Areas, on surplus public sector land, and sites within and on the edge of town centres, as well as utilising small sites

B prioritise sites which are well-connected by existing or planned public transport

C proactively explore the potential to intensify the use of land to support additional homes and workspaces, promoting higher density development, particularly in locations that are well-connected to jobs, services, infrastructure and amenities by public transport, walking and cycling

D applying a design-led approach to determine the optimum development capacity of sites

E understand what is valued about existing places and use this as a catalyst for growth, renewal, and place-making, strengthening London's distinct and varied character

F protect and enhance London's open spaces, including the Green Belt, Metropolitan Open Land, designated nature conservation sites and local spaces, and promote the creation of new green infrastructure and urban greening, including aiming to secure net biodiversity gains where possible

G plan for good local walking, cycling and public transport connections to support a strategic target of 80 per cent of all journeys using sustainable travel, enabling car-free lifestyles that allow an efficient use of land, as well as using new and enhanced public transport links to unlock growth

H maximise opportunities to use infrastructure assets for more than one purpose, to make the best use of land and support efficient maintenance.

Policy D13 - Agent of Change

A The Agent of Change principle places the responsibility for mitigating impacts from existing noise and other nuisance-generating activities or uses on the proposed new noise-sensitive development. Boroughs should ensure that Development Plans and planning decisions reflect the Agent of Change principle and take account of existing noise and other nuisance-generating uses in a sensitive manner when new development is proposed nearby.

B Development should be designed to ensure that established noise and other nuisance-generating uses remain viable and can continue or grow without unreasonable restrictions being placed on them.

C New noise and other nuisance-generating development proposed close to residential and other noise-sensitive uses should put in place measures to mitigate and manage any noise impacts for neighbouring residents and businesses.

Policy D4 - Delivering good design

Design analysis and development certainty

A Masterplans and design codes should be used to help bring forward development and ensure it delivers high quality design and place-making based on the requirements set out in Part B of Policy D3 Optimising site capacity through the design-led approach.

B Where appropriate, visual, environmental and movement modelling/ assessments should be undertaken to analyse potential design options for an area, site or development proposal. These models, particularly 3D virtual reality and other interactive digital models, should, where possible, be used to inform plan-making and decision-taking, and to engage Londoners in the planning process.

Design scrutiny

C Design and access statements submitted with development proposals should demonstrate that the proposal meets the design requirements of the London Plan.

D The design of development proposals should be thoroughly scrutinised by borough planning, urban design, and conservation officers, utilising the analytical tools set out in Part B, local evidence, and expert advice where appropriate. In addition, boroughs and applicants should make use of the design review process to assess and inform design options early in the planning process. Development proposals referable to the Mayor must have undergone at least one design review early on in their preparation before a planning application is made, or demonstrate that they have undergone a local borough process of design scrutiny, based on the principles set out in Part E if they:

- 1) include a residential component that exceeds 350 units per hectare; or*
- 2) propose a building defined as a tall building by the borough (see Policy D9 Tall buildings), or that is more than 30m in height where there is no local definition of a tall building.*

E The format of design reviews for any development should be agreed with the borough and comply with the Mayor's guidance on review principles, process and management, ensuring that:

- 1) design reviews are carried out transparently by independent experts in relevant disciplines*
- 2) design review comments are mindful of the wider policy context and focus on interpreting policy for the specific scheme*

- 3) where a scheme is reviewed more than once, subsequent design reviews reference and build on the recommendations of previous design reviews*
- 4) design review recommendations are appropriately recorded and communicated to officers and decision makers*
- 5) schemes show how they have considered and addressed the design review recommendations*
- 6) planning decisions demonstrate how design review has been addressed.*

Maintaining design quality

F The design quality of development should be retained through to completion by:

- 1) ensuring maximum detail appropriate for the design stage is provided to avoid the need for later design amendments and to ensure scheme quality is not adversely affected by later decisions on construction, materials, landscaping details or minor alterations to layout or form of the development*
- 2) ensuring the wording of the planning permission, and associated conditions and legal agreement, provide clarity regarding the quality of design*
- 3) avoiding deferring the assessment of the design quality of large elements of a development to the consideration of a planning condition or referred matter*
- 4) local planning authorities considering conditioning the ongoing involvement of the original design team to monitor the design quality of a development through to completion.*

Policy D14 - Noise

A In order to reduce, manage and mitigate noise to improve health and quality of life, residential and other non-aviation development proposals should manage noise by:

- 1) avoiding significant adverse noise impacts on health and quality of life*
- 2) reflecting the Agent of Change principle as set out in Policy D13 Agent of Change*
- 3) mitigating and minimising the existing and potential adverse impacts of noise on, from, within, as a result of, or in the vicinity of new development without placing unreasonable restrictions on existing noise-generating uses*
- 4) improving and enhancing the acoustic environment and promoting appropriate soundscapes (including Quiet Areas and spaces of relative tranquillity)*
- 5) separating new noise-sensitive development from major noise sources (such as road, rail, air transport and some types of industrial use) through the use of distance, screening, layout, orientation, uses and materials – in preference to sole reliance on sound insulation*
- 6) where it is not possible to achieve separation of noise-sensitive development and noise sources without undue impact on other sustainable development objectives, then*

any potential adverse effects should be controlled and mitigated through applying good acoustic design principles

7) promoting new technologies and improved practices to reduce noise at source, and on the transmission path from source to receiver.

B Boroughs, and others with relevant responsibilities, should identify and nominate new Quiet Areas and protect existing Quiet Areas in line with the procedure in Defra's Noise Action Plan for Agglomerations.

Policy SI 1 - Improving air quality

A Development Plans, through relevant strategic, site-specific and area-based policies, should seek opportunities to identify and deliver further improvements to air quality and should not reduce air quality benefits that result from the Mayor's or boroughs' activities to improve air quality.

B To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed:

1) Development proposals should not:

- a) lead to further deterioration of existing poor air quality*
- b) create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits*
- c) create unacceptable risk of high levels of exposure to poor air quality.*

2) In order to meet the requirements in Part 1, as a minimum:

- a) development proposals must be at least Air Quality Neutral*
- b) development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retro-fitted mitigation measures*
- c) major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1*
- d) development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to poor air quality, such as children or older people should demonstrate that design measures have been used to minimise exposure.*

C Masterplans and development briefs for large-scale development proposals subject to an Environmental Impact Assessment should consider how local air quality can be improved across the area of the proposal as part of an air quality positive approach. To achieve this a statement should be submitted demonstrating:

1) how proposals have considered ways to maximise benefits to local air quality, and

2) what measures or design features will be put in place to reduce exposure to pollution, and how they will achieve this.

D In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.

E Development proposals should ensure that where emissions need to be reduced to meet the requirements of Air Quality Neutral or to make the impact of development on local air quality acceptable, this is done on-site. Where it can be demonstrated that emissions cannot be further reduced by on-site measures, off-site measures to improve local air quality may be acceptable, provided that equivalent air quality benefits can be demonstrated within the area affected by the development.

Policy SI 2 - Minimising greenhouse gas emissions

A Major development should be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy:

- 1) be lean: use less energy and manage demand during operation*
- 2) be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly*
- 3) be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site*
- 4) be seen: monitor, verify and report on energy performance.*

B Major development proposals should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy.

C A minimum on-site reduction of at least 35 per cent beyond Building Regulations is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:

- 1) through a cash in lieu contribution to the borough's carbon offset fund, or*
- 2) off-site provided that an alternative proposal is identified and delivery is certain.*

D Boroughs must establish and administer a carbon offset fund. Offset fund payments must be ring-fenced to implement projects that deliver carbon reductions. The operation of offset funds should be monitored and reported on annually.

E Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions.

F Development proposals referable to the Mayor should calculate whole lifecycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.

5. Policy Compliance

5.1. Accordance with National Planning Policy Framework (NPPF) (2021)

- 5.1.1. The proposed development will assist with delivering economic, environmental, and social gains.
- 5.1.2. The economic benefit of the proposal is that it will provide work for installation and maintenance of the unit and will enable the academy to improve productivity of heat within their buildings; in doing so it will assist in a step-change towards a low carbon economy. The installation of the ASHP has a social objective by supporting a healthy community through the reduction of carbon emissions and to ensure that the needs of present and future students will be met. The environmental objectives of the proposal include reducing carbon emissions by using natural resources prudently and minimising pollution. The proposal meets the Framework's definition of 'sustainable development' and the application should be granted permission as there are no adverse impacts that would significantly and demonstrably outweigh the benefits when assessed against the policies in the Framework taken as a whole.
- 5.1.3. The proposal makes effective use of land as it utilises brownfield land while meeting the need for heating the academy. This creates the opportunity to derive multiple benefits from the land on which the academy has been built. As the proposal utilises existing land within school grounds it enables more effect use of a site which provides community services, such as a school, and it improves the quality of service provision to the students through heating of the building. The proposed ASHP will reduce greenhouse gas consumption and dependency and will aid in a step change towards more sustainable heat sources and cleaner air throughout the borough. As the building's dependency on gas fuelled heating decreases the amount of gas used within the building boilers will also decrease, leading to a reduction in the burning of fossil fuels while improving air quality, reduction in greenhouse gas emissions and an overall environmental benefit. As such, the proposal is in accordance with Paragraphs 119, 120, and 123.
- 5.1.4. Paragraph 152 of Section 14 Meeting the Challenge of Climate Change encourages the increase in the use and supply of renewable and low carbon energy and heat. This is to be done through a positive strategy for emerging from these sources and opportunities for development to draw its energy supply from decentralised, renewable, or low carbon energy supply systems. The goal of the proposed development is to cover heating needs of the Harris Primary Academy Coleraine Park from air source heating, a low carbon energy and heat source. Air source heat pumps need electricity to run; however, as they are extracting renewable heat from the environment, the heat output is greater than the electricity input. This makes them an energy efficient method of heating. When electricity is sourced from natural resources, such as wind or water, the ASHP further reduces the building's reliance on energy sources, such as gas, which emit carbon and pollute the air. Electric energy generated from natural sources (such as wind, water or solar) reduces reliance on non-renewable sources (such as gas) which emit carbon and contribute to air pollution. ASHP are considered to have a long lifespan of 50+ years and have higher safety and lower maintenance requirements than standard combustion heat sources. This further reduces the carbon footprint of the academy as it will not need to replace the unit as often as traditional boilers and as such reducing the carbon cost of producing new units and maintenance materials. The proposed development should therefore be supported.
- 5.1.5. The proposal would be to help increase the use and supply of renewable and low carbon energy in the form of heat. The aim of the proposed development is to reduce the dependency of Harris Primary Academy Coleraine Park on the existing gas resources to heat the academy and to reduce their carbon footprint. The NPPF policy Paragraph 158 supports small-scale projects, such as this one, as the proposal will provide a

valuable contribution to cutting greenhouse gas emissions. The proposal results in minimal to negligible impacts to the site and surrounding area. The proposed development should therefore be supported.

5.2. Accordance with Local Policies

Development Management DPD, 2017 & Haringey's Local Plan Strategic Policies (2013-2026, 2013)

- 5.2.1. Policy DM21 states that the Council will support appropriate measures to sustainably retrofit existing homes and non-residential buildings. As the aim of the proposals are to sustainably retrofit an existing non-residential building, the proposals are in line with Policy DC21(b) and therefore should be supported.
- 5.2.2. SP0 states that *"When considering development proposals, the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework (NPPF)."* Paragraph 7 within the NPPF states *"At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs."* As the proposal would assist in the reduction of the use of carbon-based heating, it is considered to be in accordance with the NPPF. Section 4.2 of this document further describes how the proposals accord with sustainable development within the NPPF.
- 5.2.3. As the aim of the proposals is to reduce carbon emissions from an existing building and to establish a decentralised heat source SP4: *Working towards a Low Carbon Haringey* and Policy DM23: *Environmental Protection* are applicable to the site and as such allows for the installation of the ASHP. The proposals create the opportunity for an existing building within Haringey to reduce carbon emissions and improve air quality when producing heat for Harris Primary Academy Coleraine Park. Although the ASHP will need to be connected to the existing electricity network to run the heat output is greater than the electricity input and the ASHP will be extracting renewable heat from the environment. As such the ASHP is an energy efficient method of heating. The system proposed will minimise waste and pollution and is an excellent example of a move to a low carbon community. The proposed development is considered to be in accordance with the local policy SP0 and SP4. A Noise Impact Assessment (NIA) of the proposal has been submitted with this application. The conclusion of the NIA determined that including intrinsic mitigation the noise level would be no more than 2 dB above existing background noise levels. On the basis of the mitigation being installed as proposed, it is concluded that noise should not be a prohibitive factor in the determination of this planning application. The impact of the proposed ASHP on the receptors was concluded to be negligible. As such, the proposed development is considered to be in accordance with the local policies DM1 and DM23.

The London Plan (2021)

- 5.2.4. The London Plan aims to create successful sustainable mixed-use places that make the best use of land. The proposed ASHP will utilise land that is directly adjacent an existing building and is located in a small area that does not have a designated use within the school grounds. As the proposal will enable Harris Primary Academy to use the land around the building for the secondary purpose of heating the building, the proposed development is compliant with Policy GG2.
- 5.2.5. The proposed ASHP units are constructed with modifications such as an oversized heat exchanger (evaporation/condensation coil), low rpm EC fans, complete compressor compartment soundproofing and additional box that encloses the compressor. The low noise setting of the fan regulation is a benefit of this specific model. The inclusion of such features is a technology and improved practice to reduce noise at the source, and on the transmission path from source to receiver. The very high temperature reversible heat pump with R134a refrigerant or R513A on demand. Single or double circuits according to the compressors number, equipped with semihermetic reciprocating compressors with liquid injection to ensure hot water production up to 80°C. Axial fans with phase-cut speed control, plates heat exchanger and Al/Cu coils. All sizes with 2 circuits have separated aeraulic sides: the fan speed control for evaporation/ condensation and

the defrost cycles are managed independently on each circuit. Although the BS4142 assessment found that the rating noise level is expected to be significantly below the measured background noise level during both the day and night-time periods further mitigation can be agreed as a condition of permission where necessary. The impact will reside at the 'NOAEL' (No Observed Adverse Effect Level) in accordance with the NPSE. As the proposal includes integral noise mitigation the development is compliant with Policy D13 and D14.

- 5.2.6. The proposals will assist London in meeting the Mayor's zero-carbon target by 2050. The London Plan states that the boroughs of London should generate heat for our buildings via local clean, low-carbon and renewable sources. The energy hierarchy also encourages buildings to "be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly". This is in addition to the goal of the London Plan to have non-residential developments have on-site reduction of energy use by 15% through energy efficiency measures. The proposed ASHP will reduce greenhouse gas consumption and dependency and will aid in a step change towards more sustainable heat sources and cleaner air throughout the borough. As the building's dependency on gas fuelled heating decreases the amount of gas used within the building boilers will also decrease, leading to a reduction in the burning of fossil fuels while improving air quality. Air source heat pumps (ASHP) absorb heat from the outside air to heat buildings and hot water. They can still extract heat when air temperatures are as low as -15°C. Air source heat pumps need electricity to run; however, as they are extracting renewable heat from the environment, the heat output is greater than the electricity input. If the source of electricity is from a renewable resource this further reduces the impact on the environment. This makes them an energy efficient method of heating. It is considered that the development is compliant with Policy SL1 and SL2.
- 5.2.7. As this Design and Access Statement demonstrates that the proposal meets the design requirements of the London Plan, the proposed development is compliant with Policy D4.

6. Conclusion

6.1. Introduction

- 6.1.1. This section brings together the information presented within this Design and Access Statement and provides a reasoned conclusion for the approval of this application.

6.2. Accordance with Local and National Policies

- 6.2.1. It has been evidenced that the proposal is sustainable and would not create any adverse impacts. The use of the existing access and semi-enclosed location of the ASHP would ensure minimal to negligible visual and noise impact while enabling the majority of the site to continue its existing use as a school ground. The location and fencing proposed provide easy access for maintenance requirements but ensures safe operation by preventing children from accessing the unit. The proposed development will enable Harris Primary Academy Coleraine Park to reduce running costs, carbon emissions, and dependency on the central energy mainframe.
- 6.2.2. This Design and Access Statement demonstrates that the proposed development accords with the relevant policies of the National Planning Policy Framework, and Haringey's development plan, which is currently made up of the Strategic Policies, Development Management Policies, alongside the London Plan.
- 6.2.3. As set out above, it is respectfully requested that the proposal is approved in its current form.

6.3. Additional information

- 6.3.1. In the event that additional information, clarification, or further details concerning the proposed development is required during the determination period the applicant is prepared to provide this on request.
- 6.3.2. This statement refers to the willingness of the applicant to engage in a dialogue with the local planning authority to agree a timely planning permission.

Document Ends.