

# NORTH HERTS LEISURE CENTRE - LEARNER POOL

DESIGN AND ACCESS STATEMENT

DECARBONISATION



# ISSUE HISTORY

| REV | DATE     | DESCRIPTION    | CHK. | AUTH. |
|-----|----------|----------------|------|-------|
| P01 | 24/04/26 | Planning Issue | KP   | BH    |
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# CONTENTS

|     |                                |   |
|-----|--------------------------------|---|
| 1.0 | INTRODUCTION                   | 1 |
| 2.0 | SCHEME SUMMARY                 | 1 |
| 3.0 | THE SITE                       | 2 |
| 3.1 | Site Description               | 2 |
| 3.2 | Site Context                   | 2 |
| 4.0 | PROPOSED ARCHITECTURAL CHANGES | 3 |
| 4.1 | Use                            | 3 |
| 4.2 | Amount                         | 3 |
| 4.3 | Layout                         | 3 |
| 4.4 | Scale                          | 3 |
| 4.5 | Landscaping                    | 3 |
| 4.6 | Appearance                     | 4 |
| 4.7 | Inclusive Access               | 4 |
| 4.8 | Vehicular and Transport Links  | 4 |
| 5.0 | MECHANICAL SERVICES            | 5 |
| 5.1 | Plant Equipment                | 5 |
| 5.2 | Sustainability Benefit         | 5 |

## 1.0 INTRODUCTION

Saunders Boston Architects have been appointed on behalf of North Hertfordshire District Council to provide architectural design services in the project to provide reduction of energy and carbon use in the operation of the Learner Pool at the North Herts Leisure Centre. Funding for the de-carbonisation works is being provided via the SALIX Public Sector Decarbonisation Grant Scheme to support the NHDC commitment to Net Zero carbon target by 2040.

The works to be undertaken include the replacement of mechanical plant including the removal of gas boilers and the addition of Air Source Heat Pump (ASHP) units.

## 2.0 SCHEME SUMMARY

In order to provide improvements in the energy use of the building, the following works are proposed to reduce the expenditure of energy to heat the building, better manage the heating and ventilation of spaces and have energy expenditure be from less carbon intensive processes:

- Replace the existing gas fired boiler plant with air source heat pump technology & modify existing heating systems for the Learner Pool in particular
- Providing an enclosure for the ASHP units so as to minimise visual impact and noise for visitors and neighbours of the site
- Provide screening planting to minimise the visual impact of the fencing around the ASHP units
- Provide signage on the elevation of the Learner Pool to provide a greater sense of arrival on to the site for the Leisure Centre

## 3.0 THE SITE

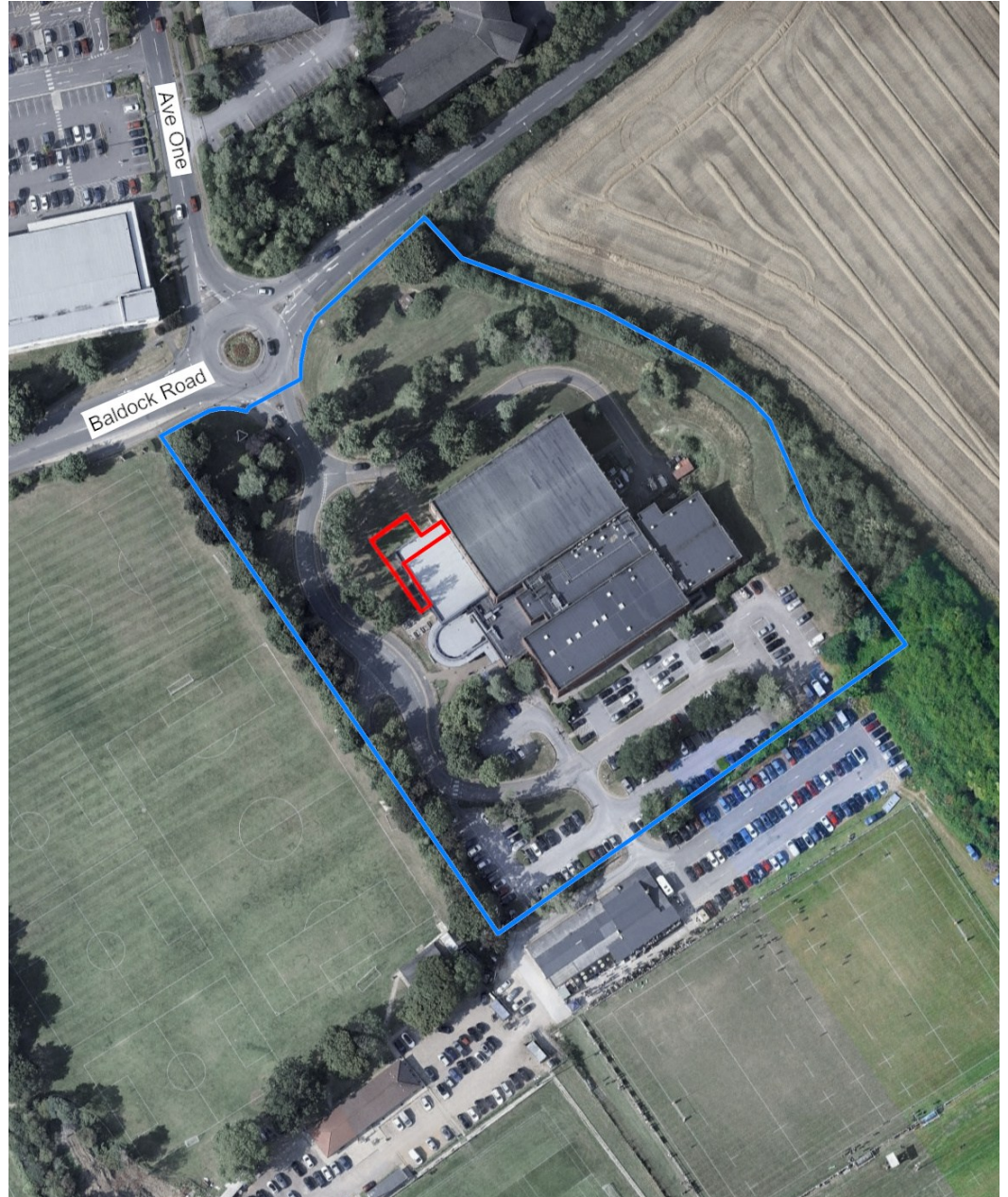
### 3.1 Site Description

North Herts Leisure Centre was originally constructed in 1982, with a learner pool & café extension added to the southwest elevation in 2017. The building comprises two swimming pools, a gym, spa, squash courts, fitness studios, a sports hall, a soft play area, and a café. NHDC lease the leisure centre from the Letchworth Garden City Heritage Foundation, and is managed by Everyone Active.

The site is to the east of Letchworth Garden City town centre and is close to the A1(M). It is bounded by the B656 to the north, and the Letchworth Garden City rugby Club & Letchworth Eagles football Club to the east & south. To the west lies open farmland.

### 3.2 Site Context

The application is for the provision of Air Source Heat Pump (ASHP) units adjacent to the 2017 learner pool extension, the other parts of the site having been recently upgraded with the provision of ASHP units, photovoltaic panels, new glazing and the targeted improvement of the insulation of the building with insulated render facades.



## 4.0 PROPOSED ARCHITECTURAL CHANGES

### 4.1 Use

The proposal for the application has the existing Leisure Centre in general and the Learner Pool in particular continuing to operate in the same way as they do now.

### 4.2 Amount

The existing Leisure Centre building footprint is 4,305m<sup>2</sup>, with the a floor area of 5,380m<sup>2</sup> spread over two floors. The new ASHP units and the surrounding fencing covers an area of 33.4m<sup>2</sup> of which 21.8m<sup>2</sup> is placed over the existing soft landscaping of the lawn adjacent to the Learner Pool extension.

The works proposed to be undertaken are as follows:

- Replace the existing gas fired boiler plant with air source heat pump technology & modify existing heating systems accordingly. This will involve replacement of plant equipment within the existing plant areas of the Learner Pool and the addition of a number of Air Source Heat Pump units immediately adjacent to the Learner Pool extension.
- A fenced off enclosure is required for the external ASHP units, to reduce their visual impact, provide physical security and reduce noise outbreak. To further reduce the visual impact of the fencing itself, screening planting as well as the provision of signage on the brick wall of the Learner Pool is also proposed

### 4.3 Layout

The proposed location for the ASHP units and the fencing that secures it and obscures it from public view is immediately adjacent to the existing plant room for the Learner Pool. This minimises disruption to primary elevations as well as minimising cable and conduit runs while allowing the units free access to the fresh air supply they rely on by being externally located.

### 4.4 Scale

The existing Leisure Centre building has two storeys of accessible rooms, with a basement plant area for the main pool hall and roof mounted plant equipment on the main building, with an overall height from entrance ground level to the highest of the flat roof decks of m. The Learner Pool extension overall height is m from local ground level to the parapet level of the Learner Pool Roof.

The extent of the external ASHP units enclosure is 4.2m across, 9.2m in length and around 2.1m in height. Other interventions to the building occur within the envelope of the existing building or are within the boundary of the ASHP enclosure.

### 4.5 Landscaping

The site in general is thoughtfully landscaped, with established trees, shrubs and areas of soft landscaping and lawns on site. The footprint of the built elements on site—the ASHP units and their immediate surrounds that require paving in order to be accessed for maintenance, make up a footprint of 33.4m<sup>2</sup> with the area within that ambit being placed over existing soft landscaping being 21.8m<sup>2</sup> : below the threshold required for statutory Biodiversity Net Gain Assessment. The area that is being built on is a grassed lawn area that is of a lower biodiversity value than some of the better established environments on site and so will cause a relatively small impact on the site's overall biodiversity. A new fence is to be installed around the ASHP to provide security, visual screening and acoustic screening for the unit from the public.

Additional Planting is proposed to provide a degree of visual screening to the enclosure without compromising the air flow requirements through the fencing or disrupt access to the pathway and doorways on the western elevation of the Learner Pool

## 4.6 Appearance

No changes to the appearance of the majority of the existing Leisure Centre are proposed. The proposed ASHP enclosure is located adjacent to the Learner Pool extension on its northern elevation adjacent to the entrance doors for the Chemical Stores for the Learner Pool.

This location directly faces the vehicular accessway to the site though it does not constitute the primary elevation (which is the Eastern Elevation). It is however a suitable location for the inclusion of signage - providing a sense of arrival to the Leisure Centre site while providing interest to a blank facade

The ASHP units will be installed at ground floor level within a fenced enclosure that provides physical security to and from the public, visual and acoustic screening for the unit. All elements of conduit, pipework and necessary mechanical equipment to be installed will be limited to within the ASHP enclosure

## 4.7 Inclusive Access

The existing step free pedestrian access for the Leisure Centre is being retained without any modification. Access to the ASHP enclosure is restricted to trained maintenance personnel only in order to maintain the safety of the general public

## 4.8 Vehicular and Transport Links

No changes are proposed to existing roadways or parking arrangements on site and no changes are anticipated as a result of the works to the number of staff or visitors to the Leisure Centre and so no changes are anticipated to vehicular and transport matters on site as a result of the proposed works

## 5.0 MECHANICAL SERVICES

The proposed works will provide the benefit of a comprehensive upgrade to the heating infrastructure of the Learner Pool, tailored to its specific operational requirements.

### 5.1 Plant Equipment

The current gas boiler system will be replaced with low-temperature heat pumps to provide space heating and heat for the pool re-heat system. Heat pumps are particularly well suited to pool environments, offering efficient and consistent heat delivery while significantly reducing carbon emissions compared to traditional gas-fired systems.

By operating at lower flow temperatures, the heat pump system improves seasonal efficiency and reduces energy demand. The replacement of gas boilers aligns the building with current best practice in low-carbon heating and future-proofs it against tightening emissions targets.

### 5.2 Sustainability Benefits

The proposed measures will:

- Remove reliance on gas-fired heating systems
- Significantly reduce operational carbon emissions
- Improve energy efficiency and system performance
- Increase resilience to future energy and carbon regulation changes

The coordinated approach to passive design improvements and efficient mechanical services ensures the development demonstrates a clear commitment to sustainable design and responsible long-term operation.