

TECHNICAL REPORT 097 /D&A
PROPOSED SPORTS LIGHTING INSTALLATION
AT
BAXTER PARK AND BROOKSIDE LTC
CHEADLE, SK8 4HD

Supplementary Information
and Design and Access Statement to accompany
Planning Application

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1. INTRODUCTION

The following report is submitted by ETC Sports Surfaces Ltd on behalf of Baxter Park and Brookside Lawn Tennis Club in support of their application to provide lighting to their tennis courts which are located at;

18 High Crest Avenue,

Gatley,

Cheadle

SK8 4HD



AERIAL VIEW OF COURTS



Baxter Park and Brookside Lawn Tennis Club is an LTA affiliated club and has 212 members including 88 junior members. The courts are arranged as a separately enclosed block of three, an enclosed single and an enclosed mini tennis court.

Baxter Park and Brookside tennis club in Gatley, Stockport, Cheshire was formed when two local clubs merged: Baxter Park Tennis Club and Brookside Tennis Club. As individual clubs, Baxter Park Tennis Club and Brookside Tennis Club have histories that can be traced back to the 1930's. Adjacent to the tennis Club is Baxter Park Bowling Club.

The big opportunity to make a difference came when Brookside Tennis Club were looking for a new place to play and, having sold their club to developers, had enough funds available and a mandate to commit them to a new tennis venue. The newly named club re-opened in 2014 after a complete re-build of new courts and clubhouse. There were years of fundraising and a lot of hard work from a team of dedicated enthusiasts before it was possible to achieve this great goal.

The club have had a desire for a number of years to extend playing hours especially as the club is now enjoying an increase in members and those who wish to play after work in the autumn and winter months.

The committee has recently consulted with both members and local residents to gather feedback on court lighting. The views of both groups were considered by the committee before reaching the decision to proceed with the LED fence lighting solution from Tweener.

The committee listened to concerns of the residents around the impact of traditional lighting solutions with 6m+ columns and therefore selected the lighting option with the least impact on residents. In addition the committee was encouraged by the feedback of members with 2/3rds of members supportive of investing in court lighting and the majority said they would use the courts more.



2) EXISTING FACILITIES

The facilities proposed for floodlighting comprise a separately enclosed block of three courts of overall dimensions 43.16 x 33.47m and a single enclosed court of overall dimensions 16.57m x 33.37m Both facilities are enclosed by a chainlink fence of 2.75m in height supported on tubular steel posts.

There is also a mini tennis court of overall dimensions 7m x 33.37m but this will not be lit.

The courts are surrounded by residential housing on all boundaries. The back of the nearest house to the north along High Crest Avenue are approximately 20m away from the block of three courts and the back of the nearest house to the south off of Penrhos Avenue is approximately 20m from the single court. There are shrubs and fences between the courts and the properties which will provide a degree of screening.

3) PROPOSED LIGHTING SYSTEM

The system proposed to light both of the court blocks is *Tweener* Lighting, an LED system which attaches to the top of the court fence and is mounted at a height of around 2.6m. This system has been chosen as an alternative to conventional columns mounted lights in consideration of the neighbouring properties.





3.1 Proposed Lighting Arrangement

The individual light bars are 3.8m in length and are arranged in a line of eight bars each side of the single court and the block of three courts.

The light bars are affixed to the fence posts by means of brackets. The light bars are angled downwards to minimize observers viewing the lighting source. There are two high ball lighting units on each side to enable players to view balls which are lobbed during play.

Below are photos of the installation at Our Lady of Muswell Tennis Club in North London who have a *Tweener* installation on their single court.

The light bars will be green powder coated to match the tennis court fence colour.



3.2. Illuminance levels

The average Lux levels calculated over the total playing area are as follows;

A - Single Court

Single Court Average = 366 lux

B - Block of three Courts

Outer Two Courts Average = 203 lux

Middle Court Average = 186 lux

EN 12193 *Light and Lighting – Sports Lighting* calls for a lighting average of 300 lux and a uniformity of 0.7 minimum for a Class 2 facility (Regional/Local/Training) and an average of 200 lux and a uniformity of 0.6 minimum for a class 3 facility (Local/Training/Recreational/School Sports)

The club are satisfied with the lighting calculated levels achieved in the attached design. The club propose to have the option to operate the lights from 15:00 to 22:00 from Monday to Sunday. It is envisaged that the lights will not be in 100% use during these periods based on current court usage during summer months and the effect of poor weather in the winter. Separate LED low level lighting located near the clubhouse and car park will remain on 15 minutes after the 22:00 curfew to allow safe egress for players.

3.3 Uniformity of illuminance

Because a good uniformity is important, the calculated value for uniformity is:

A Single Court (e min/ e ave)

Single Court = 0.71

B Block of three Courts (e min/ e ave)

Outer Two Courts Average = 0.62

Middle Court Average = 0.89



3.4 Type of luminaires

The luminaires will be of an LED type light bar which use less energy than Metal Halide. Appendix 1 illustrates one of these fittings. The LED's ensure a reduction of intrusive light around the facility.

3.5 Number of luminaires

Our design shows an arrangement 8 No. luminaires on each side of the single and block of three courts plus two high ball lights on each line of Tweeners.

3.6 Pollution control

The luminaires proposed are of an LED type. These type of luminaries have been specifically designed to provide a sharp cut-off for use where low light pollution is required.

Appendix 2 shows computer predicted Horizontal Illuminance contours outside the court perimeter. Windbreak netting will be installed on the full height of the fence on the east and west fence lines of the triple court and at the full height of the fence on all four sides of the single court. This will ensure that the light will be contained within the courts with overspill kept to a minimum and offer the neighbours increased privacy as was mentioned in their feedback. There are also screening effects of existing trees, hedge or boundary fences. Our plot shows the horizontal Illuminance as low as 5 lux on the triple court boundary and 2 lux on the single court boundary.



INSERT NEW PLAN

LIGHTING OVERSPILL – BLOCK OF THREE COURTS

(TAKES NO ACCOUNT OF TREE SCREENING)

INSERT NEW PLAN

LIGHTING OVERSPILL – SINGLE COURT

(TAKES ACCOUNT OF TREE SCREENING)

4. ACCESS

Access to the site will be through the gate off High Crest Avenue or via the car park on Penrhos Avenue and the works are anticipated to take no more than a week to complete.

The proposed type of light fittings and method of fitting is shown in Appendix 1

The drawings are shown in Appendix 2

An aerial photograph of the site is shown in Appendix 3



A site location map is shown in Appendix 4

Site photographs are shown in Appendix 5

The lighting designs are shown in Appendix 6

Photographs of Our Lady of Muswell Tennis Club are shown in Appendix 7

The Tweener date sheet is shown in Appendix 8

A photo of full height tennis privacy netting is shown in Appendix 9

END OF REPORT



APPENDIX 1

ILLUSTRATION OF LIGHT FITTING PLUS INSTALLATION PHOTOGRAPHS







LIGHT BARS ANGLED DOWNWARDS





HIGH BALL FITTING BENEATH TWEENER BARS



APPENDIX 2

DRAWINGS (SEE ATTACHED PDF'S)

001 – OS PLAN (RED AND BLUE LINE DRAWING)

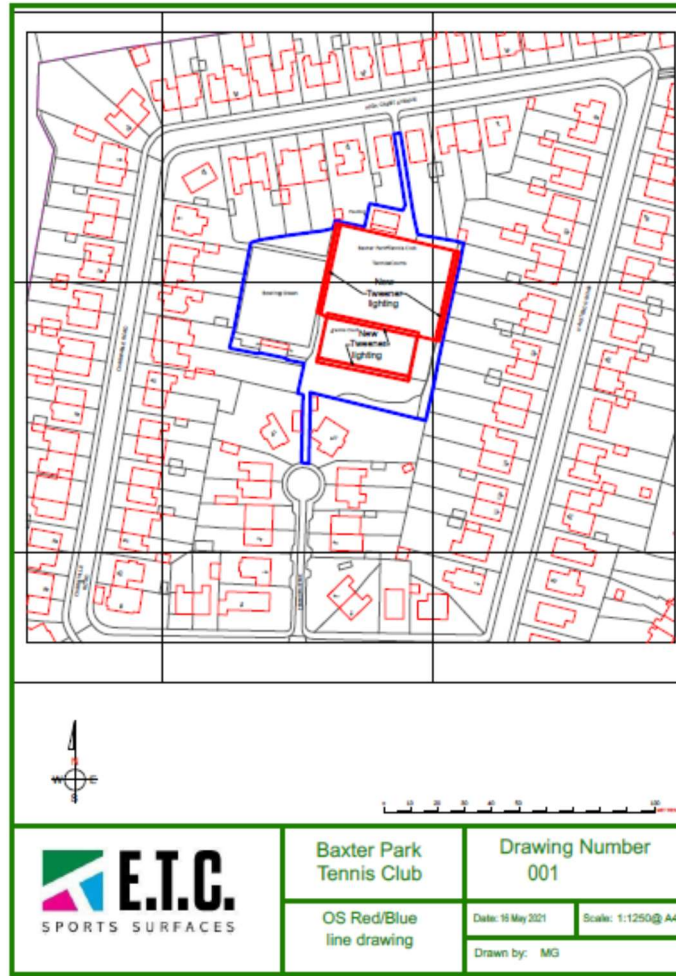
007 - SITE PLAN (AS EXISTING)

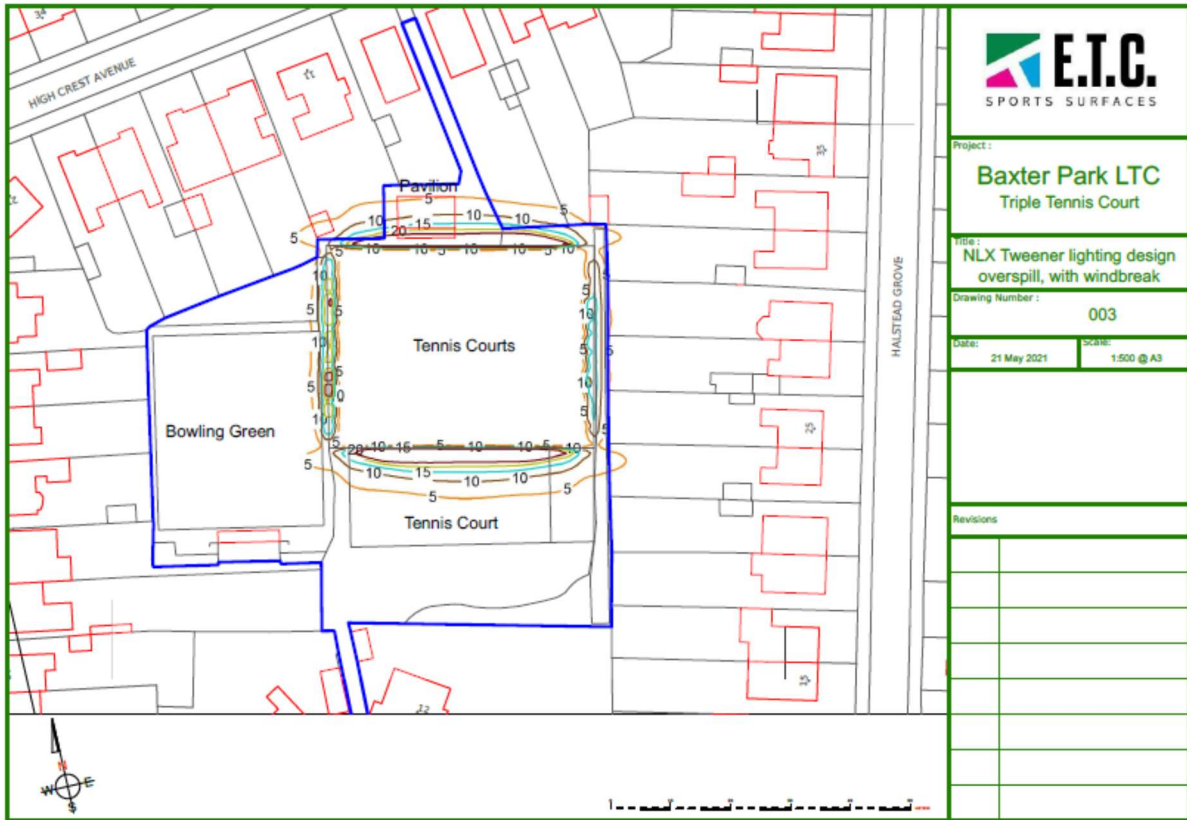
003 - LIGHTING OVERSPILL PLAN FOR TRIPLE COURT WITH WINDBREAK
FITTED TO FENCE

005 LIGHTING OVERSPILL PLAN FOR SINGLE COURT WITH WINDBREAK
FITTED



THE NEW GENERATION OF FLOODLIGHTING





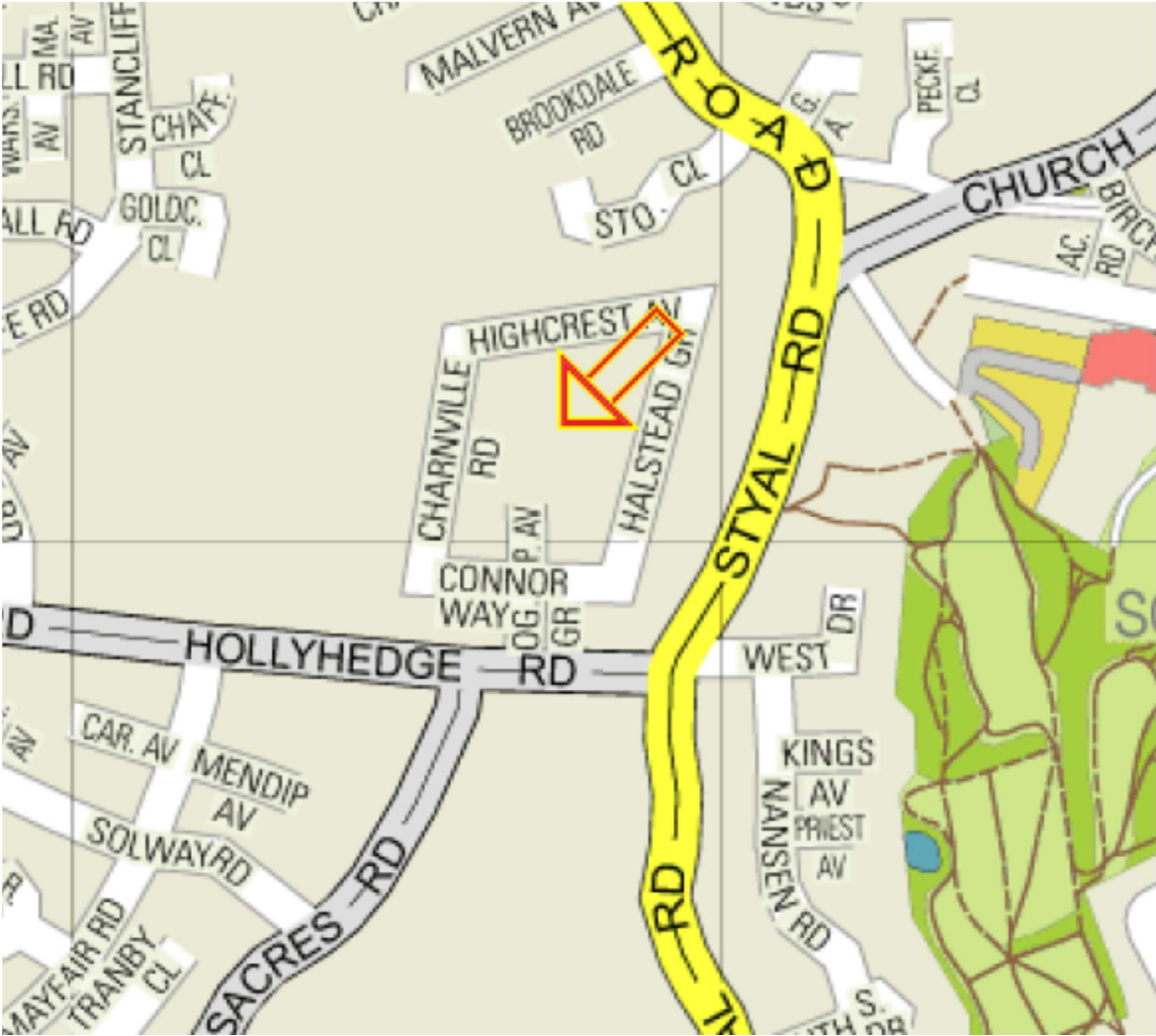
APPENDIX 3

AERIAL PHOTOGRAPH OF EXISITING SITE

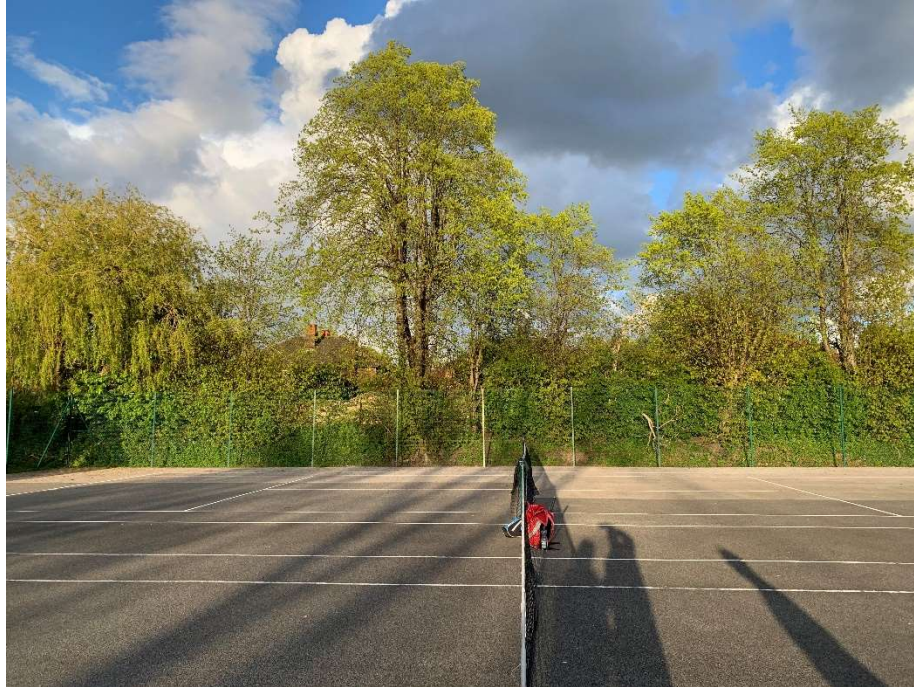


APPENDIX 4

SITE LOCATION MAP



APPENDIX 5
SITE PHOTOGRAPHS



TRIPLE COURT VIEW TOWARDS THE EAST



TRIPLE COURT VIEW TOWARDS THE NORTH

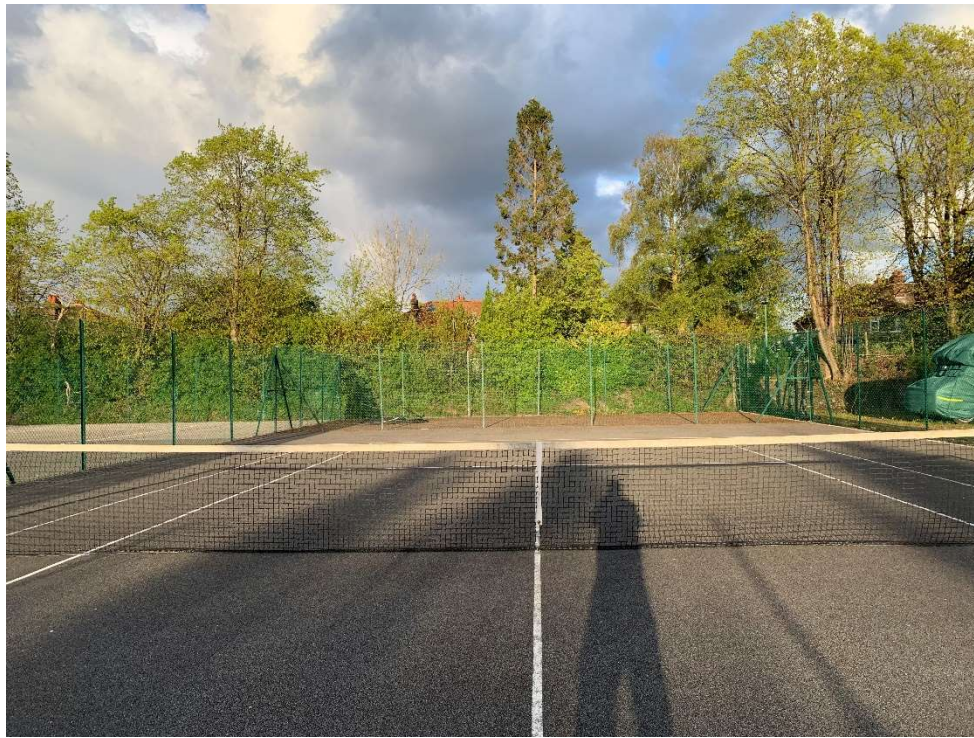




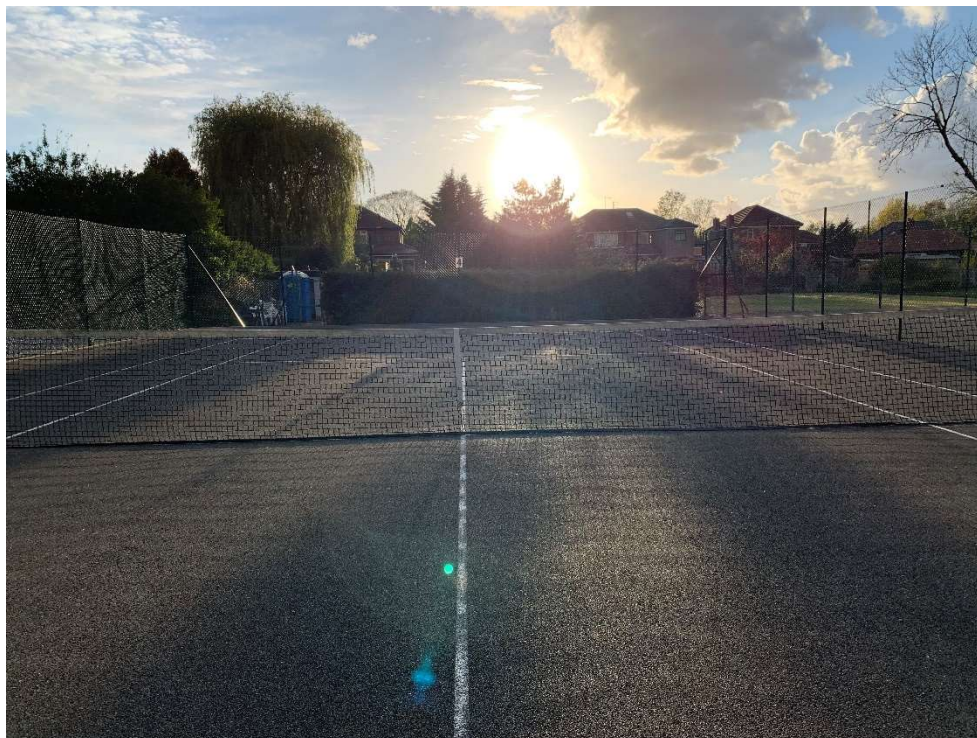
TRIPLE COURT VIEW TOWARDS THE WEST



SINGLE COURT VIEW TOWARDS THE SOUTH



SINGLE COURT VIEW TOWARDS THE EAST



SINGLE COURT VIEW TOWARDS THE WEST



APPENDIX 6

LIGHTING DESIGNS

(SEE SEPARATE PDF'S)



APPENDIX 7

PHOTOGRAPH OF INSTALLATION
AT OUR LADY OF MUSWELL TENNIS CLUB



APPENDIX 8

**TWEENER LIGHTING DATA SHEET
(SEE ATTACHED PDF)**



APPENDIX 9

FULL HEIGHT TENNIS COURT PRIVACY NETTING

