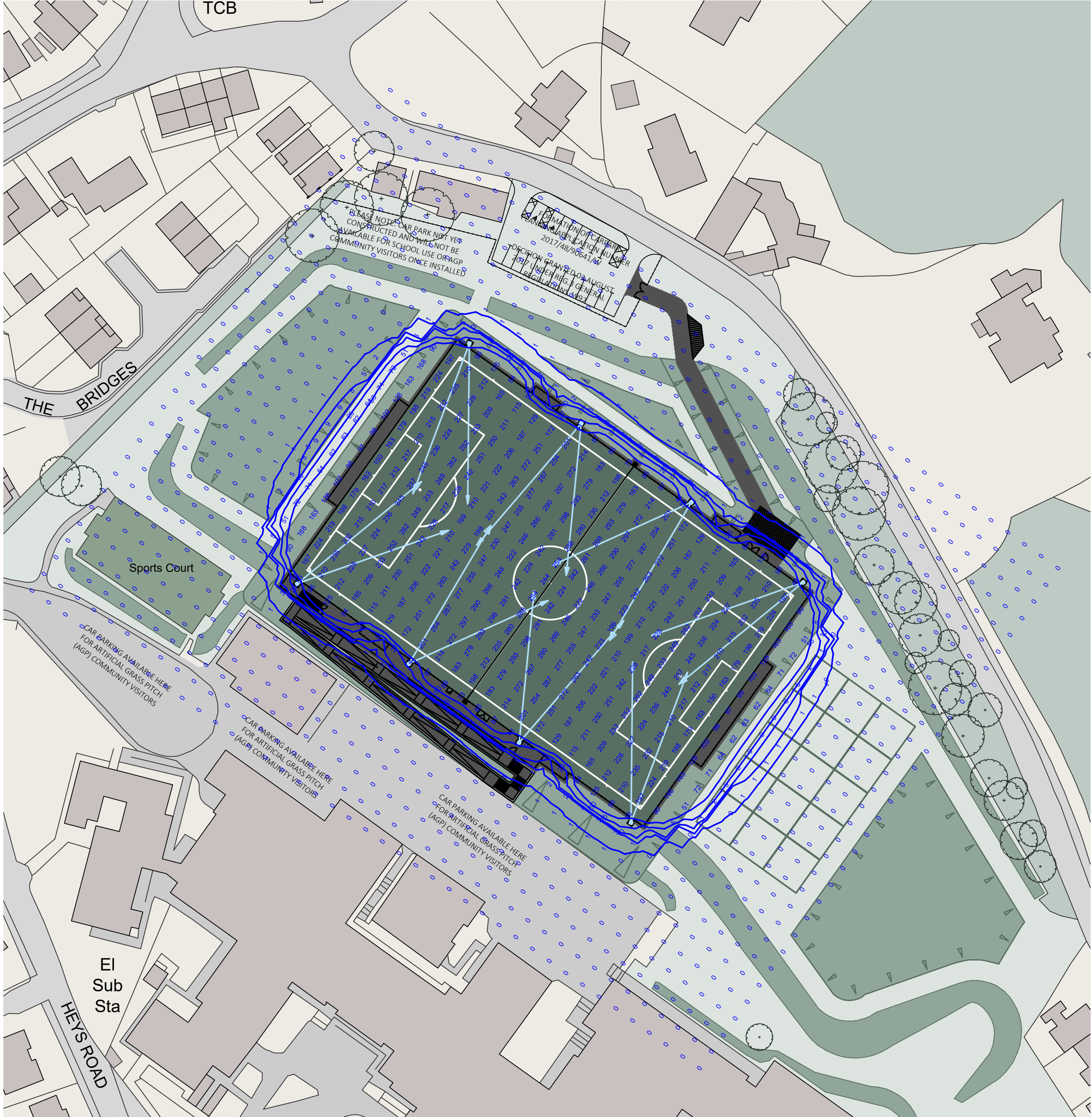


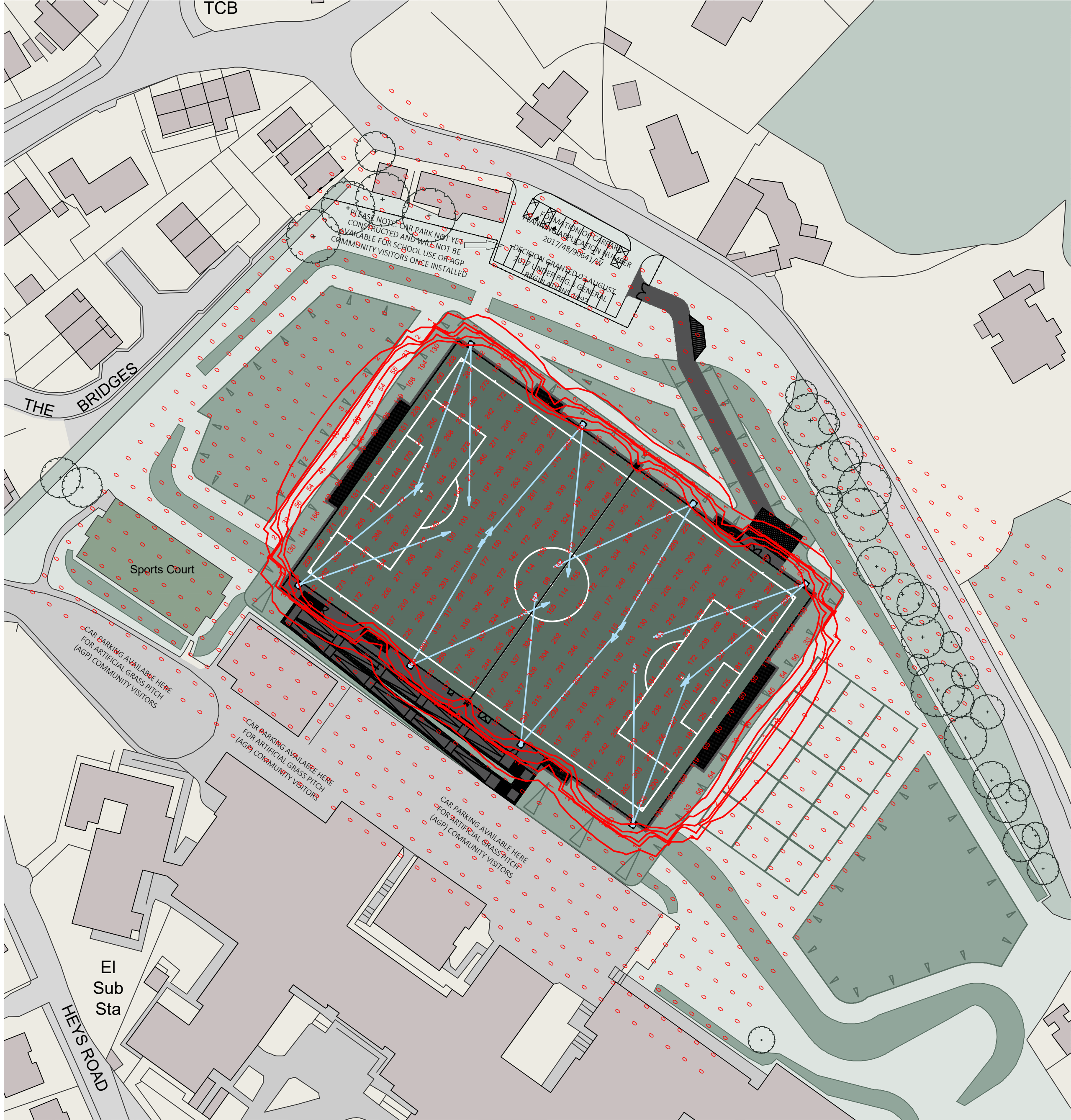
# HORIZONTAL FLOODLIGHT ILLUMINANCE

ILLUSTRATING ILLUMINANCE ONTO AGP FIELD OF  
PLAY AND OVERSPILL / BACKWARD LIGHT ONTO  
SURROUNDING LAND AT GROUND LEVEL



# VERTICAL FLOODLIGHT ILLUMINANCE

ILLUSTRATING ILLUMINANCE ONTO AGP FIELD OF  
PLAY AND OVERSPILL / BACKWARD LIGHT ONTO  
SURROUNDING LAND AT 1.8M ABOVE GROUND LEVEL



### ADVISORY NOTES

PROPOSED FLOODLIGHT SYSTEM PROVIDES LIGHTING PERFORMANCE IN ACCORDANCE WITH FA RECOMMENDATIONS (FIFA'S CLASS II LIGHTING REQUIREMENTS) FOR VARYING TYPES OF PLAY AS FOLLOWS:

| USE         | MAINTAINED AVERAGE ILLUMINANCE | UNIFORMITY RATIO (EV.MIN/EV.AVE) | DIVERSITY RATIO (EV.MIN/EV.MAX) | MAXIMUM GLARE RATING (GR) |
|-------------|--------------------------------|----------------------------------|---------------------------------|---------------------------|
| COMPETITION | >200LUX                        | >0.60                            | >0.50                           | <50                       |
| CROSS PLAY  | >120LUX                        | >0.60                            | >0.50                           | <50                       |
| TRAINING    | >120LUX                        | >0.60                            | >0.50                           | <50                       |

FLOODLIGHTS SHOULD ALSO BE DESIGNED IN SUCH A WAY TO ALLOW EACH INDIVIDUAL SECTION OF THE PITCH (LATERAL CROSS PITCHES) TO BE INDIVIDUALLY PROGRAMMED TO FACILITATE ECONOMICAL MANAGEMENT AND PREVENT OVER LIGHTING TO PITCHES AREAS WHEN NOT IN USE

### ILP REDUCTION OF OBTRUSIVE LIGHT GN01:2011

THIS SITE IS CLASSIFIED AS AN ENVIRONMENTAL ZONE E2, WHICH IS A RURAL AREA WITH LOW DISTRICT BRIGHTNESS; FOR EXAMPLE A VILLAGE OR RELATIVELY DARK OUTER SUBURBAN LOCATION

THE ILP DESIGN GUIDANCE FOR THIS ENVIRONMENTAL ZONE IS AS FOLLOWS:

#### OBTRUSIVE LIGHT LIMITATIONS FOR EXTERIOR LIGHTING INSTALLATIONS - GENERAL OBSERVERS

|                                         |                                       |
|-----------------------------------------|---------------------------------------|
| SKY GLOW ULR (MAX %)                    | 2.5%                                  |
| LIGHT INTRUSION (INTO WINDOWS) EV (LUX) | 5 LUX PRE CURFEW / 1 LUX POST CURFEW  |
| LUMINAIRE INTENSITY I (CANDELAS)        | 7500 I PRE CURFEW / 500 I POST CURFEW |
| BUILDING LUMINANCE AVERAGE L (CD/M2)    | 5 CD/M2                               |

### LIGHT IMPACT

PROPOSED FLOODLIGHTS COMPRISE EIGHT 15M HIGH MASTS MOUNTED WITH SIXTEEN LED LUMINAIRES IN THE FOLLOWING ARRANGEMENT:

|                       |                 |                       |                 |
|-----------------------|-----------------|-----------------------|-----------------|
| NORTH WESTERN MAST    | 2NO. LUMINAIRES | SOUTH WESTERN MAST    | 2NO. LUMINAIRES |
| CENTRAL NORTHERN MAST | 2NO. LUMINAIRES | CENTRAL SOUTHERN MAST | 2NO. LUMINAIRES |
| CENTRAL NORTHERN MAST | 2NO. LUMINAIRES | CENTRAL SOUTHERN MAST | 2NO. LUMINAIRES |
| NORTH EASTERN MAST    | 2NO. LUMINAIRES | SOUTH EASTERN MAST    | 2NO. LUMINAIRES |

THE FLOODLIGHT DESIGN ACHIEVES VALUES WHICH MEETS THE REQUIREMENTS OF BS EN 12193 AS FOLLOWS:

| PERIOD                                       | PROPERTY | RESULT              |                |
|----------------------------------------------|----------|---------------------|----------------|
| INITIAL 100HRS USAGE                         |          | AVERAGE ILLUMINANCE | 263 LUX        |
|                                              |          | UNIFORMITY          | 0.70 MIN / AVE |
| MAINTAINED USAGE WITH 0.9 MAINTENANCE FACTOR |          | AVERAGE ILLUMINANCE | 237 LUX        |
|                                              |          | UNIFORMITY          | 0.70 MIN / AVE |

THE EXTENT OF LIGHT INTRUSION AND LIGHT TRESPASS TO RESIDENTIAL NEIGHBOURS CREATED BY NEW AGP FLOODLIGHTS COMPLIES WITH ILP RECOMMENDATIONS FOR AN ENVIRONMENTAL ZONE E2 AND MITIGATION TREATMENTS ARE NOT REQUIRED

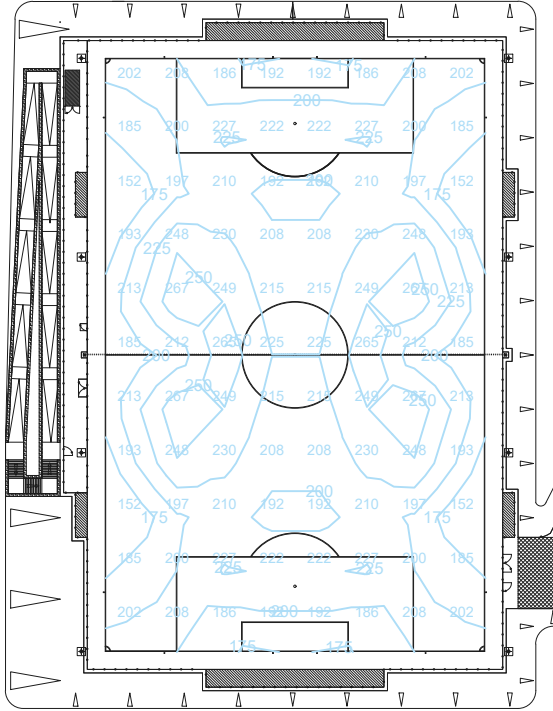
CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF WORK  
NO GUARANTEE CAN BE GIVEN THAT ALL SERVICES HAVE BEEN SHOWN ON THE DRAWING  
NO GUARANTEE CAN BE GIVEN TO THE ACCURACY AND COMPLETENESS OF ANY SERVICE PROVIDER RECORD INFORMATION SHOWN IN THIS DRAWING AND NO LIABILITY WILL BE ACCEPTED FOR ANY LOSSES THAT ARISE DUE TO A LACK OF ACCURACY IN ANY SERVICE PROVIDER RECORD INFORMATION  
RELEVANT SERVICE DRAWINGS SHOULD BE OBTAINED FROM APPROPRIATE SERVICE PROVIDERS AND USED IN CONJUNCTION WITH THIS DRAWING  
REFERENCE SHOULD ALSO BE MADE TO HISTORICAL PLANS AND AS BUILT DRAWINGS  
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15M HIGH FLOODLIGHT MAST WITH LUMINAIRES

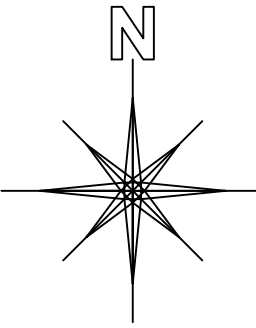
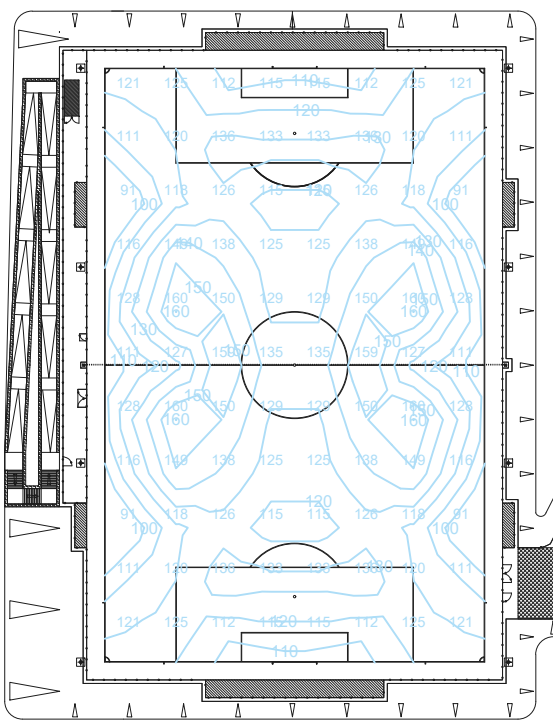
INCREMENTAL HORIZONTAL ILLUMINANCE CONTOURS (EXPRESSED IN LUX )

INCREMENTAL VERTICAL ILLUMINANCE CONTOURS (BACKWARD LIGHT / OVERSPILL) (EXPRESSED IN LUX)

HORIZONTAL ILLUMINANCE ACROSS  
AGP FIELD OF PLAY  
FULL MATCH PLAY ILLUMINANCE



HORIZONTAL ILLUMINANCE ACROSS  
AGP FIELD OF PLAY  
REDUCED TRAINING ILLUMINANCE



### LEGEND / KEY



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AUTHOR \_\_\_\_\_  
CLIENT \_\_\_\_\_  
PROJECT \_\_\_\_\_  
HOLMFIRTH HIGH SCHOOL  
ARTIFICIAL GRASS PITCH (AGP)

| PROPOSED AGP FLOODLIGHTS |              |                 |
|--------------------------|--------------|-----------------|
| DRAWING                  | PLANNING     | TB              |
| DATE                     | LSUK 19-0273 | 26.03.2020      |
| PROJECT                  | A1           | 1:500           |
| PROJECT                  | 19-0273      | BM25583 0517 08 |

