



Havant S.a.r.l. (Luxembourg)
c/o XLB Property LTD

Planning Application
for Development
at
Langstone Technology Park
Phase 2
Havant

External Lighting
Assessment

Issue 8



Client Name	Havant S.a.r.l. (Luxembourg) c/o XLB Property LTD
Client Address	Silver House 31-35 Beak Street London W1F 9DP
Property:	Langstone Technology Park – Phase 2 Havant
Project Reference:	5490
Issue:	Planning Submission – Issue 8
Date:	August 2024
Prepared by:	PDJ
Checked by:	MDC
Validated by:	MDC



C O N T E N T S

	Page
1.00 Introduction	1
2.00 External Lighting	2
3.00 Development and Estate Road Lighting	3
4.00 Conclusion	5

APPENDIX

Drawing No. 5490-WPL-XXX-100-DR-EL-54010 – External Lighting Design Criteria

Drawing No. 5490-WPL-XXX-100-DR-EL-54011 – External Lighting Layout



1.00 INTRODUCTION

The purpose of this document is to summarise the intended external lighting scheme to be provided to the industrial unit development site known as Langstone Technology Park – Phase 2 on behalf of Havant S.a.r.l. (Luxembourg) c/o XLB Property LTD

This external lighting assessment supports the Planning Application for the redevelopment of the site to provide 3no. industrial buildings, areas for car parking, services yards, landscaping, footpaths and associated works.

The planning condition 36 comments have been incorporated with regards to the checking the potential for intrusive light spill on to the vertical residential facades in Brookmead Way.



2.00 EXTERNAL LIGHTING

The proposed external lighting scheme for the industrial unit, access roads, footpaths and the luminaires should comply with the recommendation of:

- BS5489 Code of practice for the design of road lighting, Part 1 Lighting of roads and public amenity areas
- BS EN 13201 Road Lighting, Part 2 Performance Requirements
- Institution of Lighting Professions (ILP) Guidance Notes for the Reduction of Obtrusive Light GN01: 2011
- Institute of Lighting Professionals (ILP) Guidance Note 08/18 – Bats and artificial lighting in the UK

Considering the above documents, the acceptable level of luminous intensity of the proposed luminaires should comply with Class G4, G5 or G6 requirements which is shown in the table below.

Angle from the downward vertical	Maximum Luminous Intensity (cd/klm)		
	Class G4	Class G5	Class G6
70°	500	350	350
80°	100	100	100
90°	10	10	0
>95°	0	0	0

While compliance with any class listed above is acceptable to minimise light pollution it is particularly desirable to comply with Class G6 due to its zero luminous intensity above 90° angle.

Applying the above recommendations i.e. using luminaires without any upward light component (zero light output at a maximum of 90° from the downward vertical), to an initial external lighting scheme for the proposed development layout indicates that a reasonable external lighting scheme can be produced with the use of class G4 luminaires and the use of some class G6 luminaires.

In accordance with the ILP Guidance Notes the majority of the site has been assessed as Environmental Zone Category E3 (a small town centre or suburban location with a medium district brightness lighting environment).

The requirements of the ILP Guidance Notes for the Reduction of Obtrusive Light have been considered in the development of the external lighting scheme during pre and post curfew.

The curfew represents the time where the external lighting is turned off or dimmed during the nighttime.

The curfew starts at 23:00 and ends at 7:00.

To suit the operational requirements of the recommendations of the British Standards noted above, the external lighting scheme for the industrial element of the development has been sub-divided into the following usage areas:

1. Car park
2. Circulation



3. Service yard
4. Handling zone
5. Cycle racks
6. Obtrusive Light onto neighbouring residential properties

The separate usage areas are indicated on drawing number 5490 - WPL-XXX-100-DR-EL-54010 contained in the appendix and have the following external lighting design criteria, the lux levels quoted are at roadway surface level.

Car park	10 lux average 5 lux minimum
Roadways	10 lux average 5 lux minimum
Service yard	25 lux average 0.4 uniformity
Handling zone	50 lux average
Cycle Rack	20 lux average
Obtrusive Light (illuminance in the vertical plane) at residential properties	Pre-curfew: 10 lux Post-curfew: 2 lux

3.00 DEVELOPMENT AND ESTATE ROAD LIGHTING

The proposed external lighting scheme for the development and estate roads, based on the criteria set out in section 2.00, is indicated on drawing number 5490-WPL-XXX-100-DR-EL-54011 contained in the appendix. The drawing indicates lux level isolines to show areas of equal lighting levels. The scheme consists of building and column mounted floodlights and wall mounted luminaires.

The following observations can be drawn from the illuminance levels indicated on drawing number 5490-WPL-XXX-100-DR-EL-54011:

1. Based on the lux levels plotted on the attached drawing the average illuminance values meet the design criteria. Due to limited space where luminaires can be located the illuminance values in certain areas of the service yards and car parks exceed minimum requirements in order to achieve overall required average illuminance level.
2. The column mounted floodlights are located at the perimeter of the yards to minimise light spill to the surrounding areas.
3. As the operational requirements of the service yard dictate the location of the lighting columns and the applicant's requirement to reduce lighting energy consumption by using LED luminaires the lighting levels in the adjacent areas have been minimised.
4. Backlight shields installed on column mounted luminaires reduce the light spill onto adjacent areas.
5. The 10 lux illuminance level isoline generally follows the boundary of the site, crossing it on the east in some areas adjacent to the access road and to the south west of the site adjacent to the Unit 5 service yard.
6. The 5 lux illuminance level isoline generally follows a few meters outside the boundary of the development, in some instances.



7. Calculations surfaces to determine the obtrusive lighting at the residential properties are included in the calculations. The calculation surfaces are 6 meters high.
8. The pre-curfew obtrusive lighting from the external lighting scheme onto the neighbouring residential properties is below the threshold of ILP GN01. The calculation areas show that light does not reach the properties at pre-curfew. The predicted lighting levels on the façade are 0 lux.
9. The post-curfew obtrusive lighting will also be 0 lux.

The proposed luminaire's details are stated on drawing number 5490-WPL-XXX-100-DR-EL-54011.



4.00 CONCLUSION

The following conclusions can be drawn from this assessment.

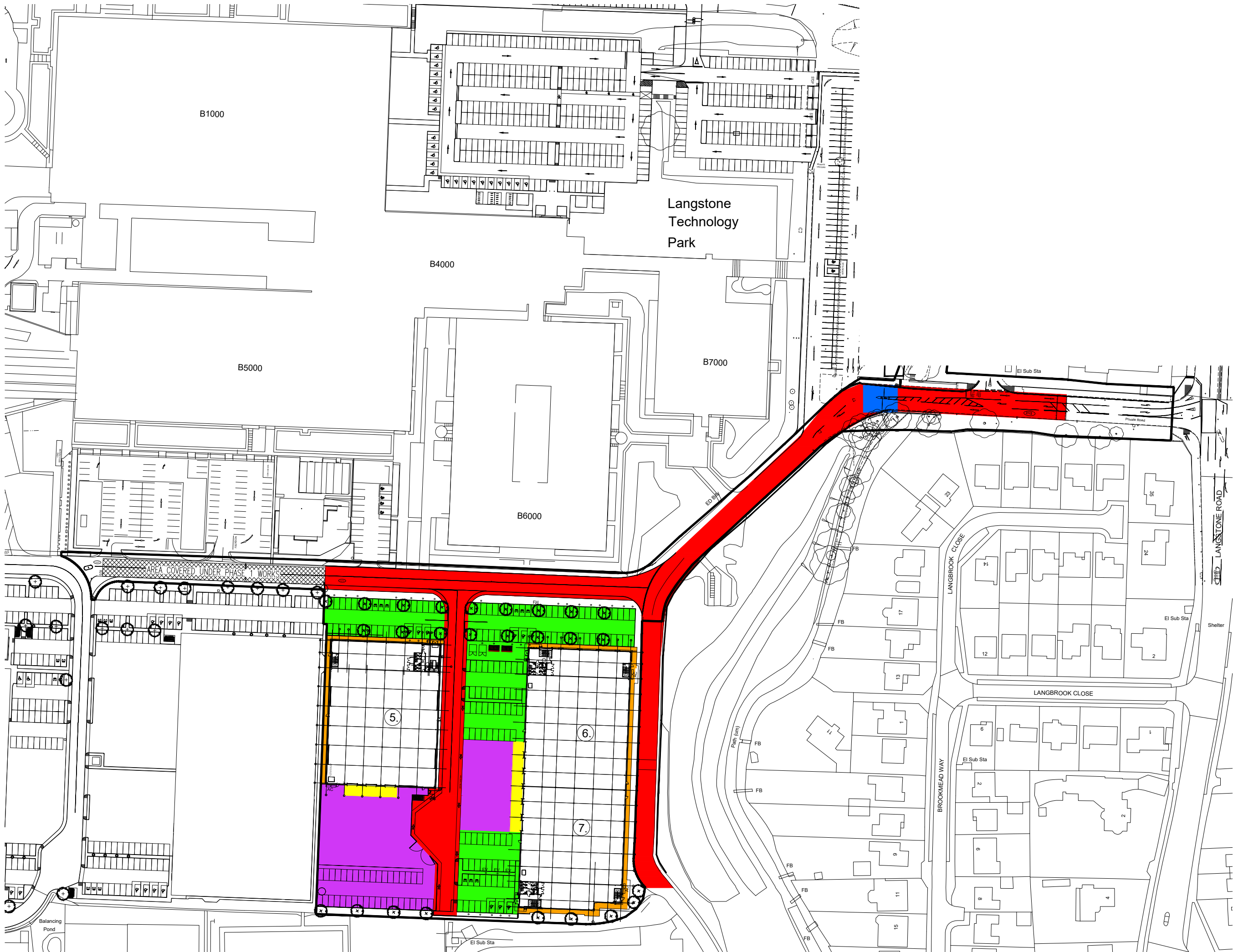
1. The operational external lighting design criteria is met in each separate functional area of the site.
2. The proposed luminaires have no upward light output.
3. The pre and post curfew external lighting installation does not cause any obtrusive light onto the neighbouring residential properties.



APPENDICES

Drawing No. 5490 - WPL-XXX-100-DR-EL-54010 – External Lighting Design Criteria

Drawing No. 5490 - WPL-XXX-100-DR-EL-54011 – External Lighting Layout



- NOTES:
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND LEGEND DRAWING.
 2. DO NOT SCALE FROM THIS DRAWING.

- LEGEND:-
- ROADWAY
10 LUX AVERAGE
5 LUX MINIMUM
 - BARBER
50 LUX AVERAGE
 - PARKING/CIRCULATION
10 LUX AVERAGE
5 LUX MINIMUM
 - CIRCULATION/ESCAPE LIGHTING
5 LUX AVERAGE
1 LUX MINIMUM
 - SERVICE YARD
25 LUX
0.4 LUX AVERAGE
 - HANDLING ZONE
(5 METERS IN FRONT OF LOADING BAY)
50 LUX AVERAGE
 - CYCLE RACK
20 LUX AVERAGE

6	LIGHTING CALCULATIONS UPDATED	APR 2024
5	BACKGROUND UPDATED	MAR 2024
4	ROAD ADDED TO SCHEME	MAR 2024
3	ISSUED FOR TENDER, NO ALTERNATIONS.	MAR 2024
2	REVISED SCHEME ADDED.	FEB 2024
Ref.	Revision	Date

TENDER

Watkins Payne

info@watkinspayne.co.uk | www.watkinspayne.co.uk

LONDON OFFICE
34, 36, 38
25-27 CANTON STREET
LONDON E1 3JF
TEL: 020 7329 3322

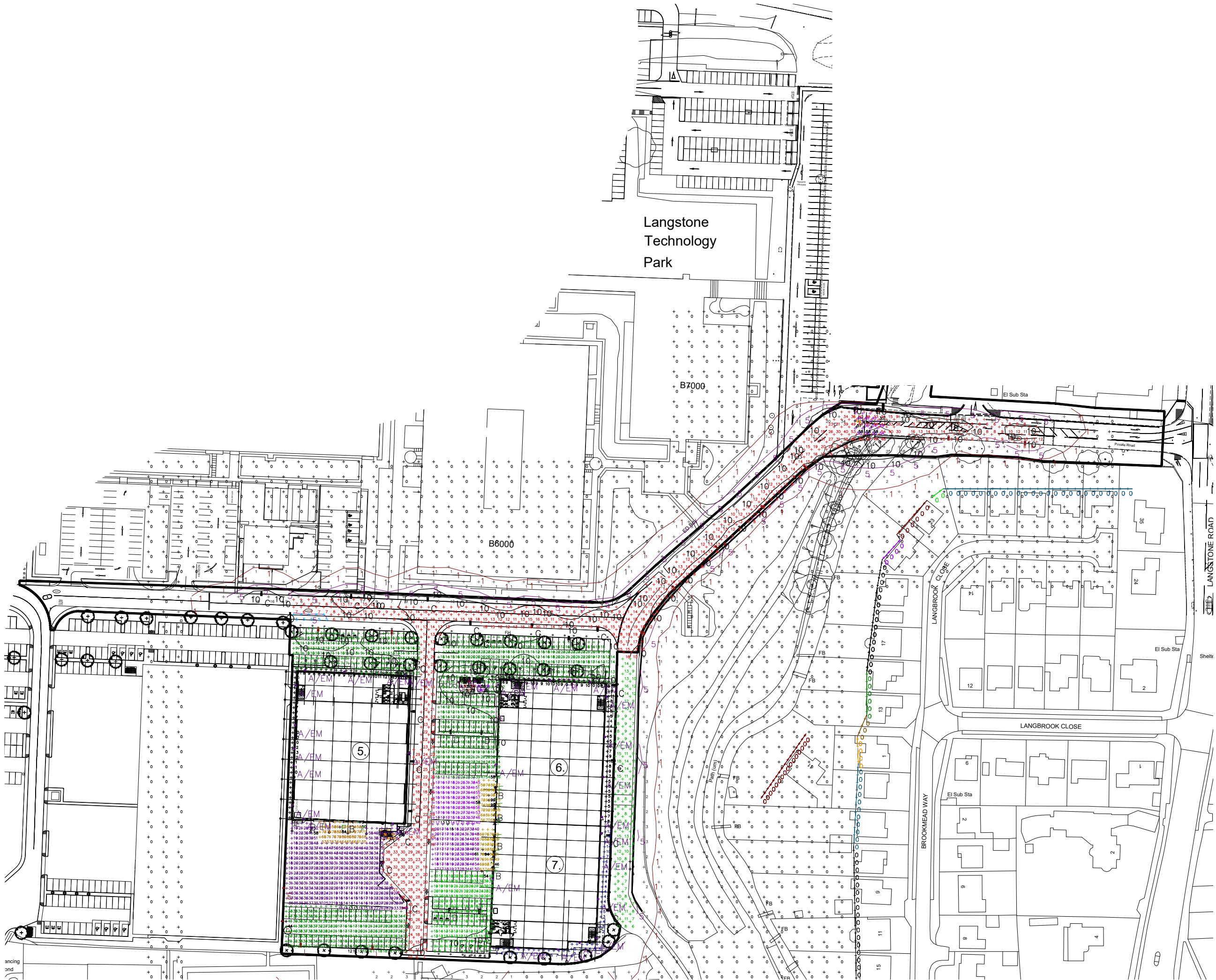
SURREY OFFICE
11 CHAMBER FARM WEST
SUNBURY-ON-THAMES
SURREY TW16 3NF
TEL: 01329 261441

Client
XLB PROPERTY LTD &
HAVANT S.A.R.L. LUXEMBOURG

Project
LANGSTONE TECHNOLOGY PARK
- PHASE 2

Title
EXTERNAL LIGHTING
DESIGN CRITERIA

Date	DECEMBER 2023	Scale at AO	1:500
Drawn By	PDJ	Validated	
Checked			
Drawing Number	5490-WPL-XXX-100-DR-EL-54010	Revision	6



- NOTES:
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND LEGEND DRAWING.
 - DO NOT SCALE FROM THIS DRAWING.

Schedule			
Symbol	Label	Quantity	Description
	A/EM	21	Down 10 Wt. 100 distribution, wall mounted at 10m
	B	7	Wallpost, 100 distribution, wall mounted at 10m
	C	17	D-Series 0 Area luminaire, 100 distribution, column mounted at 8m
	D	4	D-Series 1 Area luminaire, 100 distribution, column mounted at 8m
	E	3	D-Series 1 Area luminaire, 100 distribution, column mounted at 8m
	F	9	THW POLAR 1 65W MOD. Asymmetric distribution, wall mounted at 8m, zero 1st
	G	2	D-Series 0 Area luminaire Extreme backlight cut off column mount at 8m
	H	2	D-Series 0 Area luminaire Extreme backlight cut off column mount at 8m
	I	11	D-Series 0 Area luminaire Extreme backlight cut off column mount at 8m
	A	3	CSVT LED BATTEN - Internal luminaire

Statistics				
Description	Symbol	Avg	Min	Min/Avg
Central Roadway	+	10 lux	5 lux	0.50
Cycle Path	+	4.1 lux	0.8 lux	0.20
Cycle Shed	+	38 lux	28 lux	0.74
Cycle Shed 1	+	35 lux	28 lux	0.80
Cycle Shed 2	+	35 lux	26 lux	0.74
Entry Barrier 50 Lux	+	50 lux	35 lux	0.70
Prosephy 10 Lux	+	17 lux	5 lux	0.29
SPL	+	0 lux	0 lux	N/A
SPL (Woodland)	+	0 lux	0 lux	N/A
Split Light	+	1 lux	0 lux	0.00
Surface 1	+	0 lux	0 lux	N/A
Surface 2	+	0 lux	0 lux	N/A
Surface 3	+	0 lux	0 lux	N/A
Surface 4	+	0 lux	0 lux	N/A
Surface 5	+	0 lux	0 lux	N/A
Surface 6	+	0 lux	0 lux	N/A
Surface 7	+	0 lux	0 lux	N/A
Surface 8	+	0 lux	0 lux	N/A
Surface 9	+	0 lux	0 lux	N/A
Surface 10	+	0 lux	0 lux	N/A
Surface 11	+	0 lux	0 lux	N/A
Surface Calc	+	0 lux	0 lux	N/A
Unit 5 Bottom Car Park 50 Lux	+	25 lux	12 lux	0.48
Unit 5 Loading Doors 50 Lux	+	68 lux	50 lux	0.74
Unit 5 Perimeter 5 Lux	+	9 lux	5 lux	0.56
Unit 5 Top Car Park 10 Lux	+	10 lux	5 lux	0.50
Unit 5 Yard Area 25 Lux	+	28 lux	13 lux	0.46
Unit 6 Loading Doors 50 Lux	+	77 lux	45 lux	0.58
Unit 6 Perimeter 5 Lux	+	8 lux	4 lux	0.50
Unit 6 Sub 5th and Car Park 10 Lux	+	15 lux	4 lux	0.27
Unit 6 Yard Area 25 Lux	+	26 lux	13 lux	0.50
Unit 7 Car Park 10 Lux	+	17 lux	4 lux	0.35
Unit 7 Loading Doors 50 Lux	+	74 lux	46 lux	0.62
Unit 7 Perimeter 5 Lux	+	6 lux	1 lux	0.17
Unit 7 Yard Area 25 Lux	+	28 lux	15 lux	0.54

LEGEND:	
	1 LUX LINE
	5 LUX LINE
	10 LUX LINE

9	INTRUSIVE LIGHT CALCULATION AREAS ADDED	AUG 2024
8	FOOTPATH 51 LIGHTING OMITTED. NOW INCLUDED IN SEPARATE DRAWING	JUL 2024
7	UPDATED TO INCLUDE COLUMNS TO FOOTPATH 51	MAY 2024
6	LIGHTING CALCULATIONS UPDATED	APR 2024
5	BACKGROUND UPDATED	MAR 2024
4	ROAD LIGHTING ADDED. BACK SHIELDS ADDED TO ENTRANCE ROAD COLUMNS	MAR 2024
3	ISSUED FOR TENDER. NO ALTERNATIONS	MAR 2024
2	REVISED SCHEME ADDED	FEB 2024
Ref.	Revision	Date

TENDER

Watkins Payne

info@watkinspayne.co.uk | www.watkinspayne.co.uk

LONDON OFFICE: 100-101, 102-103, 104-105, 106-107, 108-109, 110-111, 112-113, 114-115, 116-117, 118-119, 120-121, 122-123, 124-125, 126-127, 128-129, 130-131, 132-133, 134-135, 136-137, 138-139, 140-141, 142-143, 144-145, 146-147, 148-149, 150-151, 152-153, 154-155, 156-157, 158-159, 160-161, 162-163, 164-165, 166-167, 168-169, 170-171, 172-173, 174-175, 176-177, 178-179, 180-181, 182-183, 184-185, 186-187, 188-189, 190-191, 192-193, 194-195, 196-197, 198-199, 200-201, 202-203, 204-205, 206-207, 208-209, 210-211, 212-213, 214-215, 216-217, 218-219, 220-221, 222-223, 224-225, 226-227, 228-229, 230-231, 232-233, 234-235, 236-237, 238-239, 240-241, 242-243, 244-245, 246-247, 248-249, 250-251, 252-253, 254-255, 256-257, 258-259, 260-261, 262-263, 264-265, 266-267, 268-269, 270-271, 272-273, 274-275, 276-277, 278-279, 280-281, 282-283, 284-285, 286-287, 288-289, 290-291, 292-293, 294-295, 296-297, 298-299, 300-301, 302-303, 304-305, 306-307, 308-309, 310-311, 312-313, 314-315, 316-317, 318-319, 320-321, 322-323, 324-325, 326-327, 328-329, 330-331, 332-333, 334-335, 336-337, 338-339, 340-341, 342-343, 344-345, 346-347, 348-349, 350-351, 352-353, 354-355, 356-357, 358-359, 360-361, 362-363, 364-365, 366-367, 368-369, 370-371, 372-373, 374-375, 376-377, 378-379, 380-381, 382-383, 384-385, 386-387, 388-389, 390-391, 392-393, 394-395, 396-397, 398-399, 400-401, 402-403, 404-405, 406-407, 408-409, 410-411, 412-413, 414-415, 416-417, 418-419, 420-421, 422-423, 424-425, 426-427, 428-429, 430-431, 432-433, 434-435, 436-437, 438-439, 440-441, 442-443, 444-445, 446-447, 448-449, 450-451, 452-453, 454-455, 456-457, 458-459, 460-461, 462-463, 464-465, 466-467, 468-469, 470-471, 472-473, 474-475, 476-477, 478-479, 480-481, 482-483, 484-485, 486-487, 488-489, 490-491, 492-493, 494-495, 496-497, 498-499, 500-501, 502-503, 504-505, 506-507, 508-509, 510-511, 512-513, 514-515, 516-517, 518-519, 520-521, 522-523, 524-525, 526-527, 528-529, 530-531, 532-533, 534-535, 536-537, 538-539, 540-541, 542-543, 544-545, 546-547, 548-549, 550-551, 552-553, 554-555, 556-557, 558-559, 560-561, 562-563, 564-565, 566-567, 568-569, 570-571, 572-573, 574-575, 576-577, 578-579, 580-581, 582-583, 584-585, 586-587, 588-589, 590-591, 592-593, 594-595, 596-597, 598-599, 600-601, 602-603, 604-605, 606-607, 608-609, 610-611, 612-613, 614-615, 616-617, 618-619, 620-621, 622-623, 624-625, 626-627, 628-629, 630-631, 632-633, 634-635, 636-637, 638-639, 640-641, 642-643, 644-645, 646-647, 648-649, 650-651, 652-653, 654-655, 656-657, 658-659, 660-661, 662-663, 664-665, 666-667, 668-669, 670-671, 672-673, 674-675, 676-677, 678-679, 680-681, 682-683, 684-685, 686-687, 688-689, 690-691, 692-693, 694-695, 696-697, 698-699, 700-701, 702-703, 704-705, 706-707, 708-709, 710-711, 712-713, 714-715, 716-717, 718-719, 720-721, 722-723, 724-725, 726-727, 728-729, 730-731, 732-733, 734-735, 736-737, 738-739, 740-741, 742-743, 744-745, 746-747, 748-749, 750-751, 752-753, 754-755, 756-757, 758-759, 760-761, 762-763, 764-765, 766-767, 768-769, 770-771, 772-773, 774-775, 776-777, 778-779, 780-781, 782-783, 784-785, 786-787, 788-789, 790-791, 792-793, 794-795, 796-797, 798-799, 800-801, 802-803, 804-805, 806-807, 808-809, 810-811, 812-813, 814-815, 816-817, 818-819, 820-821, 822-823, 824-825, 826-827, 828-829, 830-831, 832-833, 834-835, 836-837, 838-839, 840-841, 842-843, 844-845, 846-847, 848-849, 850-851, 852-853, 854-855, 856-857, 858-859, 860-861, 862-863, 864-865, 866-867, 868-869, 870-871, 872-873, 874-875, 876-877, 878-879, 880-881, 882-883, 884-885, 886-887, 888-889, 890-891, 892-893, 894-895, 896-897, 898-899, 900-901, 902-903, 904-905, 906-907, 908-909, 910-911, 912-913, 914-915, 916-917, 918-919, 920-921, 922-923, 924-925, 926-927, 928-929, 930-931, 932-933, 934-935, 936-937, 938-939, 940-941, 942-943, 944-945, 946-947, 948-949, 950-951, 952-953, 954-955, 956-957, 958-959, 960-961, 962-963, 964-965, 966-967, 968-969, 970-971, 972-973, 974-975, 976-977, 978-979, 980-981, 982-983, 984-985, 986-987, 988-989, 990-991, 992-993, 994-995, 996-997, 998-999, 1000-1001, 1002-1003, 1004-1005, 1006-1007, 1008-1009, 1010-1011, 1012-1013, 1014-1015, 1016-1017, 1018-1019, 1020-1021, 1022-1023, 1024-1025, 1026-1027, 1028-1029, 1030-1031, 1032-1033, 1034-1035, 1036-1037, 1038-1039, 1040-1041, 1042-1043, 1044-1045, 1046-1047, 1048-1049, 1050-1051, 1052-1053, 1054-1055, 1056-1057, 1058-1059, 1060-1061, 1062-1063, 1064-1065, 1066-1067, 1068-1069, 1070-1071, 1072-1073, 1074-1075, 1076-1077, 1078-1079, 1080-1081, 1082-1083, 1084-1085, 1086-1087, 1088-1089, 1090-1091, 1092-1093, 1094-1095, 1096-1097, 1098-1099, 1100-1101, 1102-1103, 1104-1105, 1106-1107, 1108-1109, 1110-1111, 1112-1113, 1114-1115, 1116-1117, 1118-1119, 1120-1121, 1122-1123, 1124-1125, 1126-1127, 1128-1129, 1130-1131, 1132-1133, 1134-1135, 1136-1137, 1138-1139, 1140-1141, 1142-1143, 1144-1145, 1146-1147, 1148-1149, 1150-1151, 1152-1153, 1154-1155, 1156-1157, 1158-1159, 1160-1161, 1162-1163, 1164-1165, 1166-1167, 1168-1169, 1170-1171, 1172-1173, 1174-1175, 1176-1177, 1178-1179, 1180-1181, 1182-1183, 1184-1185, 1186-1187, 1188-1189, 1190-1191, 1192-1193, 1194-1195, 1196-1197, 1198-1199, 1200-1201, 1202-1203, 1204-1205, 1206-1207, 1208-1209, 1210-1211, 1212-1213, 1214-1215, 1216-1217, 1218-1219, 1220-1221, 1222-1223, 1224-1225, 1226-1227, 1228-1229, 1230-1231, 1232-1233, 1234-1235, 1236-1237, 1238-1239, 1240-1241, 1242-1243, 1244-1245, 1246-1247, 1248-1249, 1250-1251, 1252-1253, 1254-1255, 1256-1257, 1258-1259, 1260-1261, 1262-1263, 1264-1265, 1266-1267, 1268-1269, 1270-1271, 1272-1273, 1274-1275, 1276-1277, 1278-1279, 1280-1281, 1282-1283, 1284-1285, 1286-1287, 1288-1289, 1290-1291, 1292-1293, 1294-1295, 1296-1297, 1298-1299, 1300-1301, 1302-1303, 1304-1305, 1306-1307, 1308-1309, 1310-1311, 1312-1313, 1314-1315, 1316-1317, 1318-1319, 1320-1321, 1322-1323, 1324-1325, 1326-1327, 1328-1329, 1330-1331, 1332-1333, 1334-1335, 1336-1337, 1338-1339, 1340-1341, 1342-1343, 1344-1345, 1346-1347, 1348-1349, 1350-1351, 1352-1353, 1354-1355, 1356-1357, 1358-1359, 1360-1361, 1362-1363, 1364-1365, 1366-1367, 1368-1369, 1370-1371, 1372-1373, 1374-1375, 1376-1377, 1378-1379, 1380-1381, 1382-1383, 1384-1385, 1386-1387, 1388-1389, 1390-1391, 1392-1393, 1394-1395, 1396-1397, 1398-1399, 1400-1401, 1402-1403, 1404-1405, 1406-1407, 1408-1409, 1410-1411, 1412-1413, 1414-1415, 1416-1417, 1418-1419, 1420-1421, 1422-1423, 1424-1425, 1426-1427, 1428-1429, 1430-1431, 1432-1433, 1434-1435, 1436-1437, 1438-1439, 1440-1441, 1442-1443, 1444-1445, 1446-1447, 1448-1449, 1450-1451, 1452-1453, 1454-1455, 1456-1457, 1458-1459, 1460-1461, 1462-1463, 1464-1465, 1466-1467, 1468-1469, 1470-1471, 1472-1473, 1474-1475, 1476-1477, 1478-1479, 1480-1481, 1482-1483, 1484-1485, 1486-1487, 1488-1489, 1490-1491, 1492-1493, 1494-1495, 1496-1497, 1498-1499, 1500-1501, 1502-1503, 1504-1505, 1506-1507, 1508-1509, 1510-1511, 1512-1513, 1514-1515, 1516-1517, 1518-1519, 1520-1521, 1522-1523, 1524-1525, 1526-1527, 1528-1529, 1530-1531, 1532-1533, 1534-1535, 1536-1537, 1538-1539, 1540-1541, 1542-1543, 1544-1545, 1546-1547, 1548-1549, 1550-1551, 1552-1553, 1554-1555, 1556-1557, 1558-1559, 1560-1561, 1562-1563, 1564-1565, 1566-1567, 1568-1569, 1570-1571, 1572-1573, 1574-1575, 1576-1577, 1578-1579, 1580-1581, 1582-1583, 1584-1585, 1586-1587, 1588-1589, 1590-1591, 1592-1593, 1594-1595, 1596-1597, 1598-1599, 1600-1601, 16