



Putting the Air Ambulance at the heart of Stockland...night and day.

Toby Russell, Community Landing Sites Development Officer

Background

Devon Air Ambulance (DAA) now operates until 2am every day and our vision is to provide our service 24 hours a day.

Operating and landing in towns and villages during the hours of darkness is different to how we operate during daylight. To support 'night' operations, DAA are working with communities to create a network of Community Landing Sites which are existing open spaces with either existing or newly installed floodlighting that we can operate remotely. The development of these sites is part-funded and managed by local communities. Using sites like this when it's dark means we can land in the heart of a community and reach patients much quicker and safer than if we had to land in a 'dark field'.

There are currently 112 active Community Landing Sites in towns and villages throughout Devon, with approximately a further 110 sites at various stages of development. We expect to have upwards of 250 sites throughout Devon within the next 2-3 years.

What makes a good night landing site?

A night landing site could take many different shapes or forms - it could be a green, sports pitch or playing field, a school playground or local field.

A landing site needs to be a flat area of at least 50m x 50m, to provide maximum operational benefit and safety, have pedestrian and vehicle access nearby and could be on grass, tarmac or concrete. A nearby power source for lighting is useful although not essential. Whilst tall trees or power lines within the site might be a hazard, if they are on the periphery they may not cause a problem.

Floodlighting is an essential component of a community landing site for both safety and practical reasons – it will illuminate the site during landing and take-off and will help when loading a patient in the aircraft or during transfer between a land / air ambulance.

Where there are no existing lights in place or infrastructure to support new lighting, we are asking communities to install a 10m high steel column with a set of two 150-watt LED lights. This lighting system could be powered by mains electricity supply (240v) or an off-grid solar / wind power option which includes a set of batteries.

All lighting systems need to incorporate a GSM control switch, operated using a mobile phone SIM card, which will enable the lights to be turned on/off remotely meaning no-one needs to be on hand when the Air Ambulance arrives and takes-off.

Proposal to establish a community landing site in Stockland

Devon Air Ambulance has reviewed the potential for part of the cricket pitch (outfield), by Stockland Victory Hall, to become a night landing site. The site offers a large flat area which is free from livestock and has good access from the air and nearby parking so that a patient can quite quickly be transferred via stretcher from a land ambulance to the aircraft. Air Ambulance medical teams can also easily leave the site on foot to go to a patient nearby.

DAA Operations staff have visited Stockland Victory Hall and completed an initial survey of the night landing site. In due course DAA will complete a full survey, when the site and any potential hazards are mapped, and that info will be passed onto the pilots and air crew. Having this info ensures our pilots can quickly assess a landing site before they arrive there, speeding up the time it takes to get paramedics onto the ground (potentially saving around 15-20mins) and to a patient.

There are two main requirements for DAA to be able to land at night by Stockland Victory Hall. The first is the installation of a new 10m steel column and two LED lights which would ideally be located by the northern corner of the Hall, illuminating the south-western part of the cricket pitch (outfield). Power for the lighting (240v) would be taken from the Hall. Secondly, several of the overhanging tress branches located along the south-western boundary would need to be trimmed back to provide a hazard-free landing area.

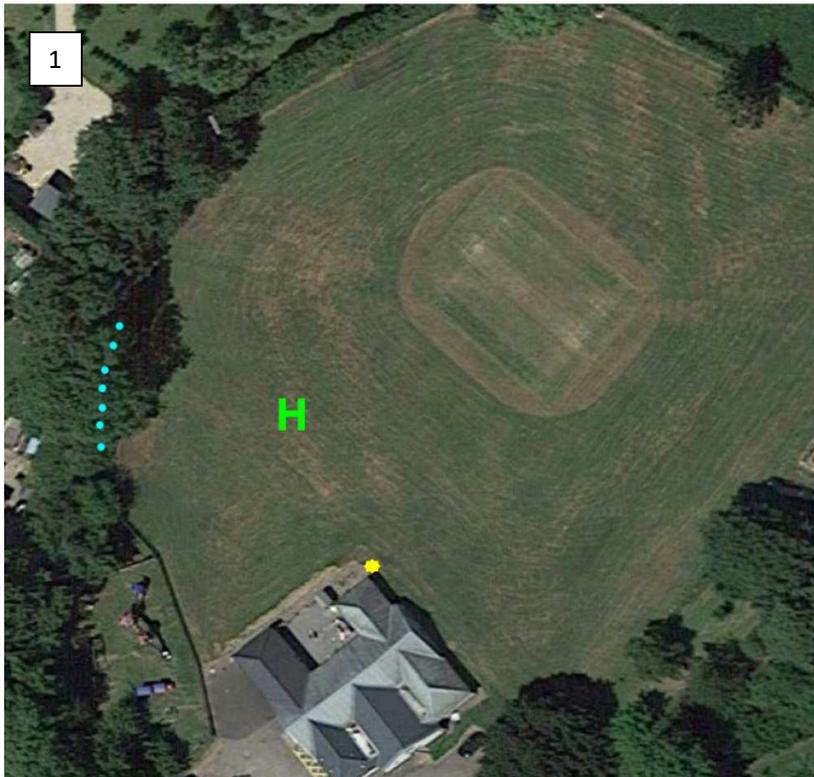


Photo 1: Shows the proposed community landing site by Stockland Victory Hall; the yellow dot indicates the location for the 10m lighting column, 'H' landing area and blue dots indicate area for overhanging tree branches to be trimmed back.

Lighting column & LED lights

As mentioned, a new 10m steel lighting column will need to be installed at the site. That column would have two 150-watt LED lights positioned at the top of the column, directed downwards to illuminate the landing area. There are no markings or other infrastructure needed to identify the landing area.

The need for a 10m high column is that, during trials, we assessed lighting columns at 6, 8 and 10m high. Only at 10m high were we able to achieve a large enough and yet 'tight' pool of light which would not cause glare for the helicopter pilots and crew as they land / take-off. Please see page overleaf with drawings of the 10m lighting column.

Photo 2: shows a 10m lighting column with LED's in place at a community landing site in Devon.



Managing a landing site:

Each community will need to put in place a system to monitor their landing site and report to DAA on any site changes. This is not arduous but means that the site is looked after properly, for example, by keeping rubbish free from the landing area or notifying DAA of any temporary (e.g. events) or permanent changes. Having the cricket field as a night landing site does not in any way change how the site is managed for the cricket club or community.

We expect the costs of running each landing site to be low – the LED lights cost around £0.15p per 4 hours of use and the remote switching unit costs under £10 a year to be kept operational. The main annual cost involved is likely to be insurance. However, the community might expect some limited maintenance costs of the equipment in the future and so we advise all communities to hold a small reserve for future maintenance.

Overview of next steps & project costs:

- Promote the project within the village and engage community. Please note there is a meeting from **7.30pm – 9pm on Wednesday 20th March** at **Stockland Victory Hall** where people can come along to find out more.
- The total cost to the community to purchase the new lighting, remote switching unit and associated electrical items at Stockland is £2,791.38 (the labour costs are covered by a grant from DAA).
- Local fundraising is carried out and a planning application for the lighting column will need to be submitted.
- Once funding and permissions are in place, the lighting is installed and the night landing site becomes operational for Devon Air Ambulance.

If you would like more information on the development of a night landing site in Stockland, please contact Toby Russell, Devon Air Ambulance *Community Landing Site Development Officer*, on: t.russell@daat.org

This drawing shall not be copied. Use from the Overview sheet to the drawing or plan to relevant specifications.

NOTES

THIS LAYOUT SHOWS THE FOLLOWING:

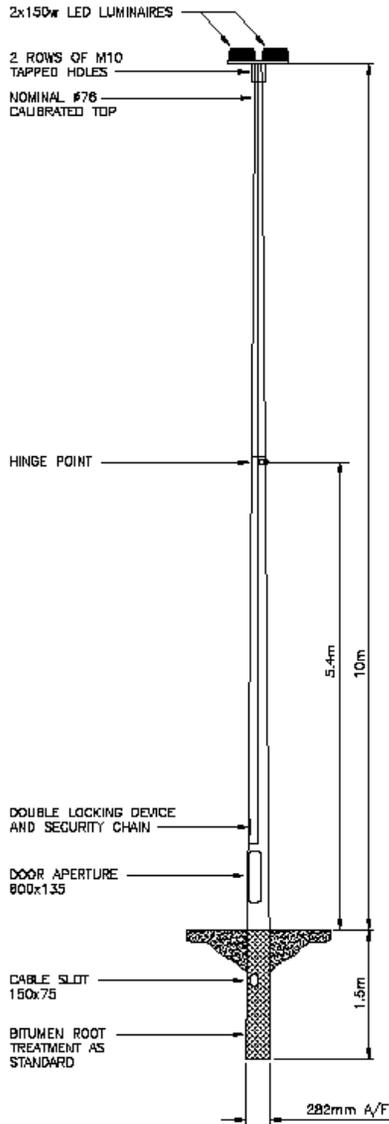
10m RAISING & LOWERING COLUMN USING A TWIN FLOODLIGHT BRACKET ON TOP, USING 2x150w LED LUMINAIRES.

DIRECT MAINS FED AND OPERATED USING THE GSM SWITCH (NO BY-PASS OPTION)

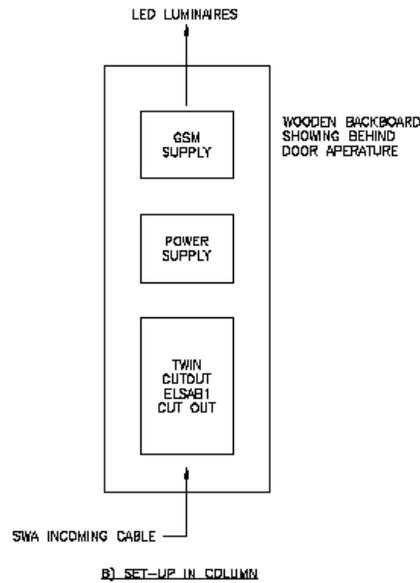
INSTALLATION METHOD:-

ROOT MOUNTING

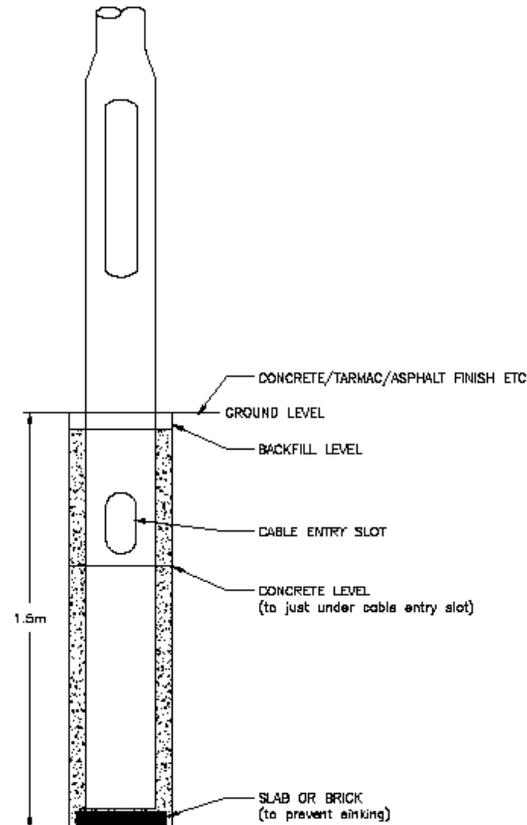
1. EXCAVATE HOLE APPROX. 100mm/200mm LARGER THAN THE BASE OF COLUMN DIAMETER TO FULL DEPTH OF RDDT.
2. PLACE A SLAB OR BRICK (TO PREVENT SINKING).
3. USING A SEMI-DRY CONCRETE MIX, PUT BOTTOM COVERING IN FIRST, THEN LOWER COLUMN ON TO SLAB.
4. CONTINUE CONCRETE FILLING (TO JUST UNDER CABLE ENTRY SLOT) AND INSERT SWA CABLE.
5. COMPACT EXCAVATED MATERIAL AS BACKFILL ON TOP OF CONCRETE.
6. IF REQUIRED, USE CONCRETE/TARMAC/ASPHALT FINISH.



A) ERECTED POSITION



B) SET-UP IN COLUMN



C) DETAIL OF COLUMN

If in doubt ask

Checked By:

1.

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| Rev | Change | By | Date |
| | | | |

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| Client | Project Name |
| | |

MAT **Electrics**
 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 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.

Drawing Title:
 STANDARD LIGHTING COLUMN LAYOUT
 MAINS FED INSTALLATION
 WITH COLUMN GSM SWITCH

| CONSTRUCTION | | |
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