

## Official – Sensitive

# Airborne data portfolio for Land to the North of Bournewood Sand and Gravel Limited, Swanley By-Pass, Kent

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## 1 Introduction

This image portfolio provides airborne imagery for Land to the North of Bournemouth Sand and Gravel Limited, Swanley By-Pass, Kent. The aerial data were acquired by Environment Agency Geomatics and external providers. This document is designed to be viewed either as a PDF or printed on high quality A3 paper by a high quality printer.

The images in this report include LIDAR, photogrammetry and aerial photography. Aerial LIDAR instruments use laser pulses to measure the distance between an aircraft and the ground surface. As the aircraft flies over the survey area a series of laser pulses are fired at the ground. In conjunction with very high accuracy navigation data, the laser pulses are used to build up an accurate elevation dataset of the ground below the aircraft, with spacings between the elevation measurements, or the resolution, of between 0.25 m and 2 m. Though the individual points of the LIDAR survey are slightly less accurate than a ground-based GPS survey, LIDAR instruments provide much more detail, collecting one million elevation measurements every 2 to 30 seconds. The specification for the current LIDAR system is that at least 66% of points are within 0.1 m of the actual value.

Photogrammetric elevation datasets are acquired using overlapping aerial photographs. By triangulating the position of points on the ground in multiple photographs and combining this with navigation data from aircraft it is possible to derive an accurate elevation dataset. The APGB dataset used in this report is slightly less detailed than LIDAR, but there is complete coverage of Great Britain.

## 2 Datasets

The datasets used in this report are described in Table 1 and are shown in Figure 1 to Figure 8.

**Table 1** Data used for Land to the North of Bournemouth Sand and Gravel Limited site

Data type	Resolution (m)	Date acquired
PSMA aerial photography	0.25	21 April 2007
LIDAR	0.5	11 – 14 March 2009
PSMA aerial photography	0.25	25 May 2012
LIDAR	1	3 - 5 March 2015
APGB aerial photography	0.25	9 August 2015
LIDAR	1	30 January 2018
APGB aerial photography	0.25	21 October 2018
LIDAR	0.5	22 December 2018

PSMA= Public Sector Mapping Agreement

APGB= Aerial Photography Great Britain



Figure 1 PSMA aerial photography acquired on 21 April 2007 for the Land to the North of Bournewood Sand and Gravel Limited site.  
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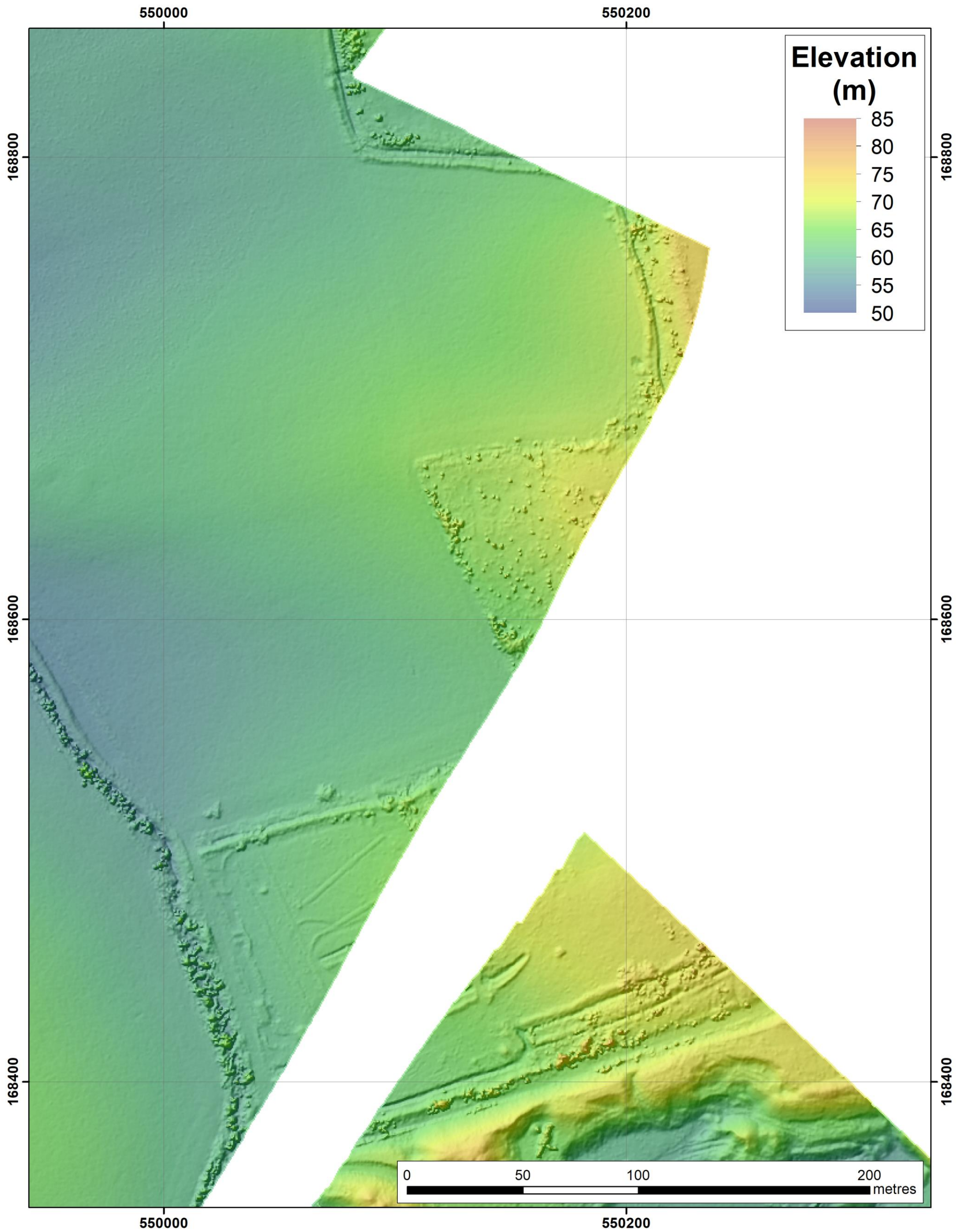


Figure 2 LIDAR elevation data acquired on 11 - 14 March 2009 for the Land to the North of Bournewood Sand and Gravel Limited site.



Figure 3 PSMA aerial photography acquired on 25 May 2012 for the Land to the North of Bournewood Sand and Gravel Limited site.  
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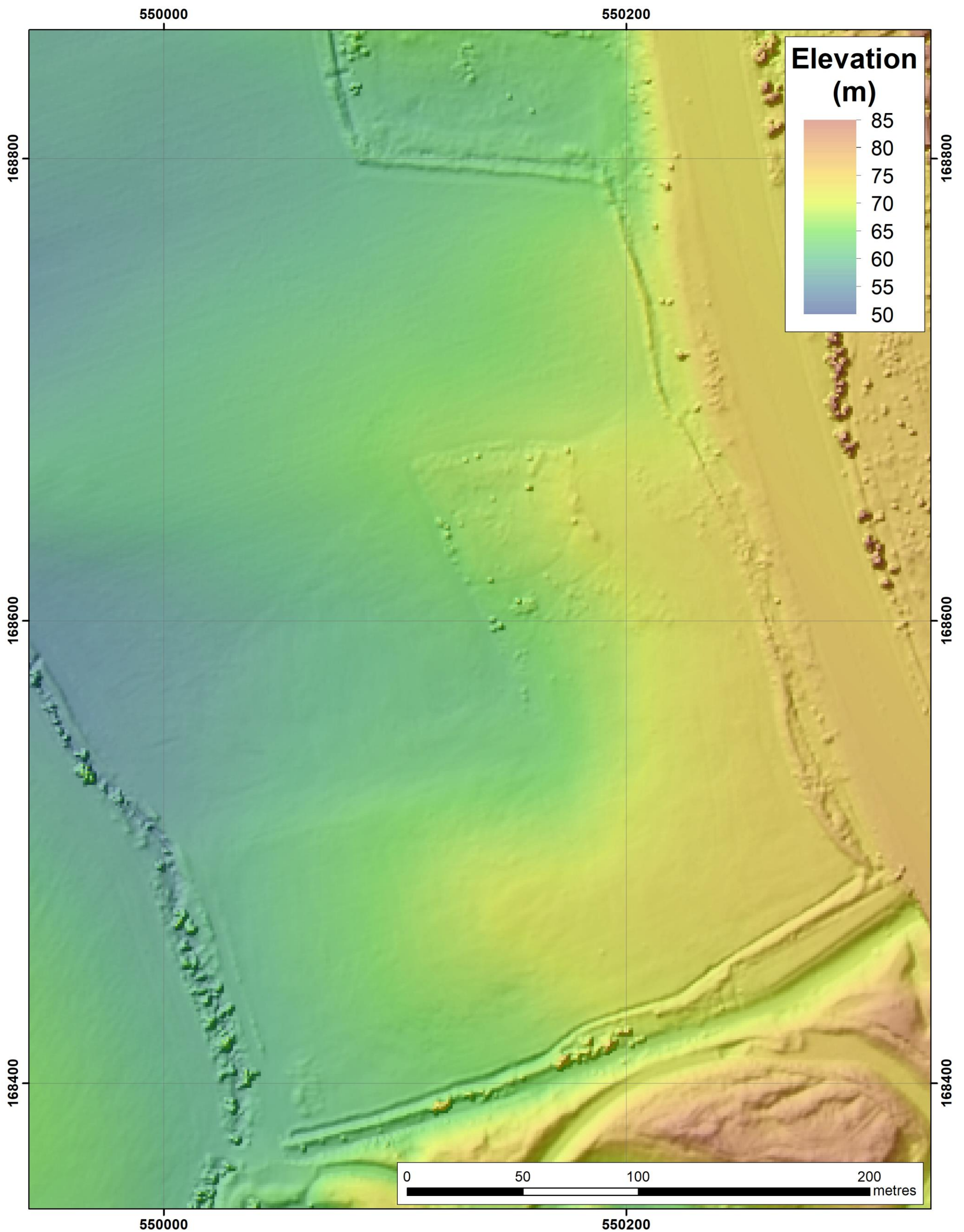


Figure 4 LIDAR elevation data acquired on 3 - 5 March 2015 for the Land to the North of Bournewood Sand and Gravel Limited site.



Figure 5 APGB aerial photography acquired on 9 August 2015 for the Land to the North of Bournewood Sand and Gravel Limited site.  
© Bluesky International.

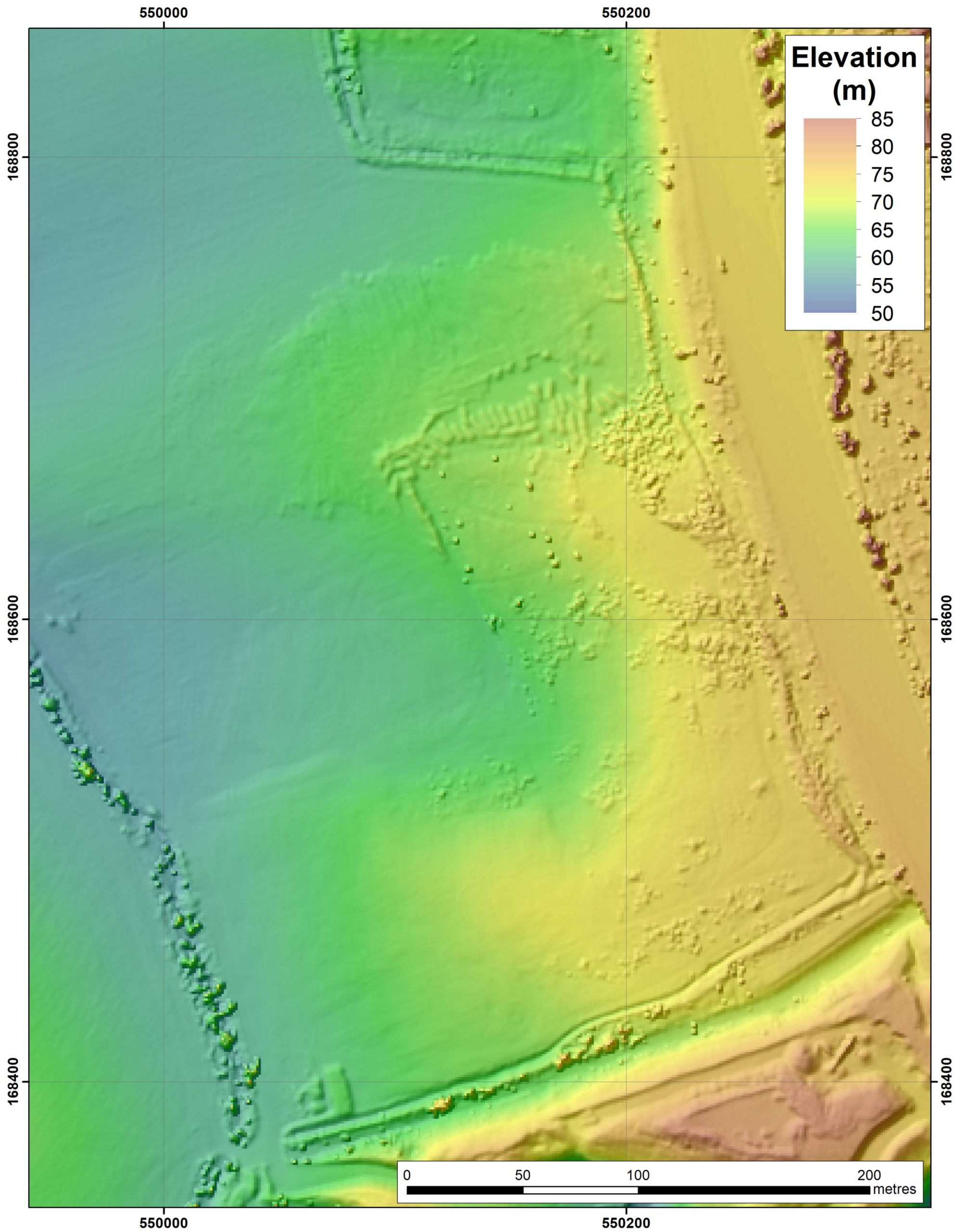


Figure 6 LIDAR elevation data acquired on 30 January 2018 for the Land to the North of Bournewood Sand and Gravel Limited site.



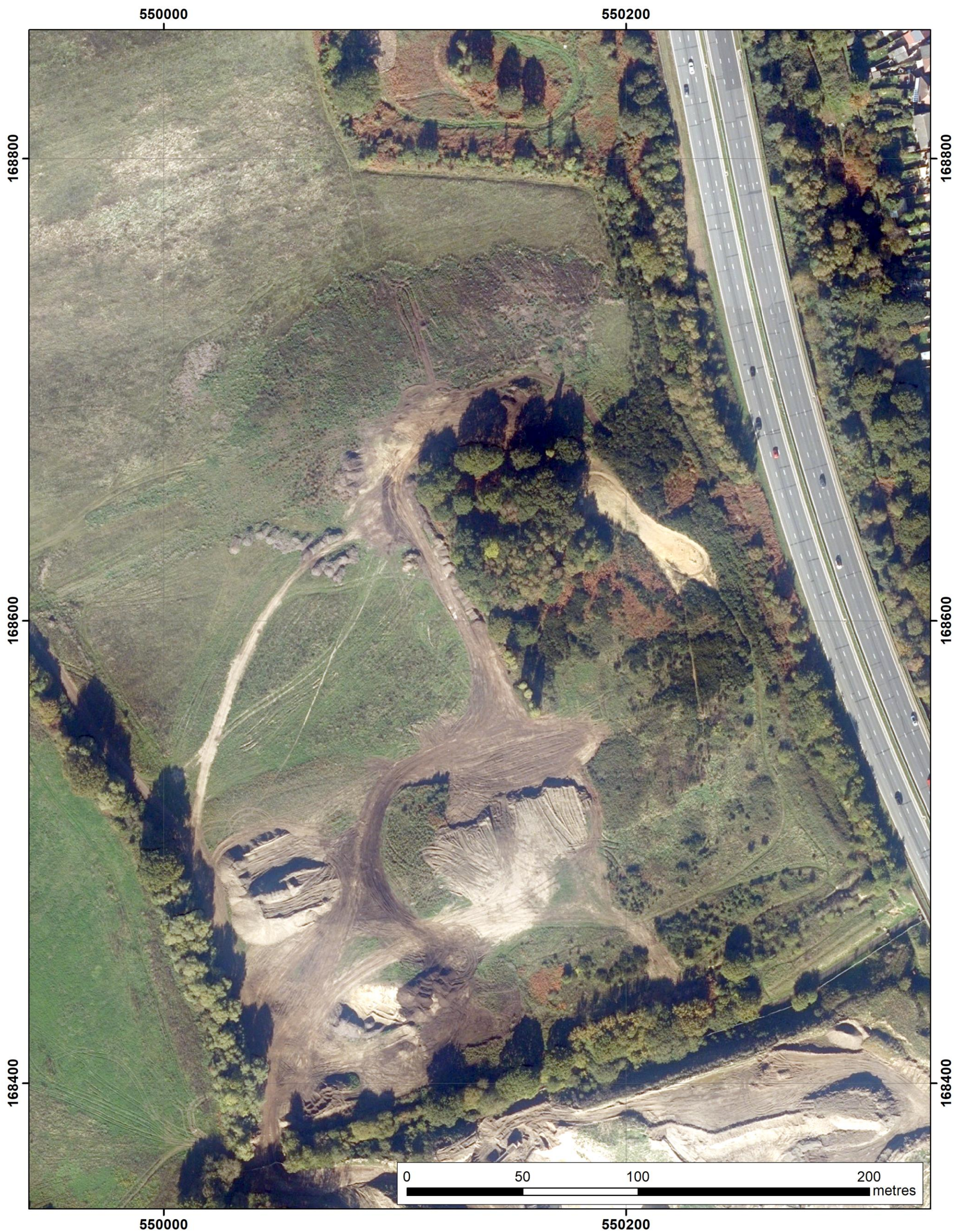


Figure 7 APGB aerial photography acquired on 21 October 2018 for the Land to the North of Bournewood Sand and Gravel Limited site.  
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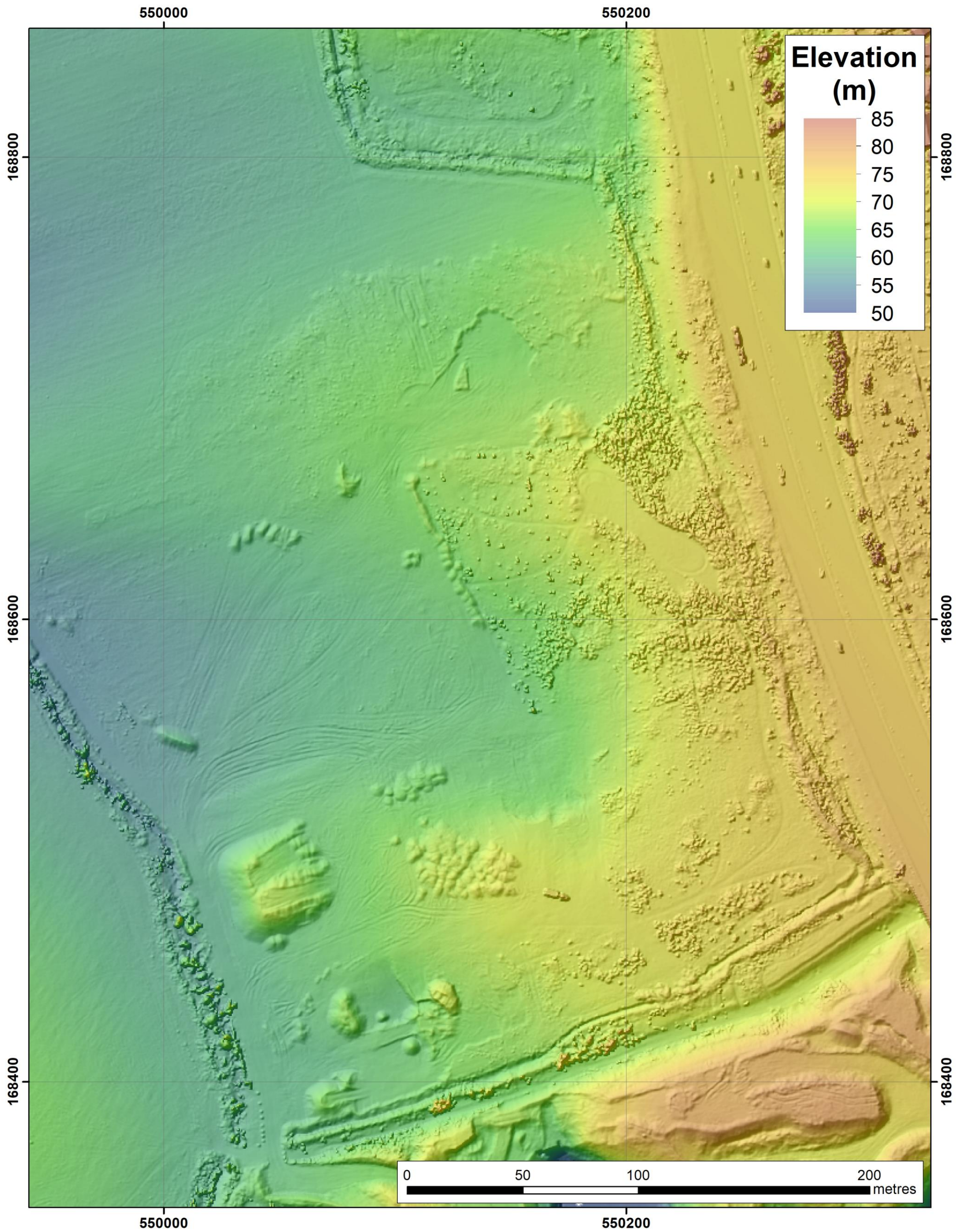


Figure 8 LIDAR elevation data acquired on 22 December 2018 for the Land to the North of Bournemouth Sand and Gravel Limited site.