

A303 Examination presentation

Cultural Heritage specific subject
hearings. Salisbury, 5th June 2019

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1. Winterbourne Stoke Crossroads barrow group, the western tunnel portal, and the integrity of the Outstanding Universal Value attributes of the World Heritage Site
2. Recent large-scale geophysical and geoarchaeological surveys: implications for present and future understanding of the World Heritage Site

The Outstanding Universal Value of the World Heritage Site

The WHS OUV designation (six attributes) encompasses the *entire* Stonehenge landscape noting the uniquely integrated and inter-referenced character of monuments and other features (architecturally, spatially, visually, etc). In particular:

Attribute 2: The physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites.

Attribute 3: The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape.

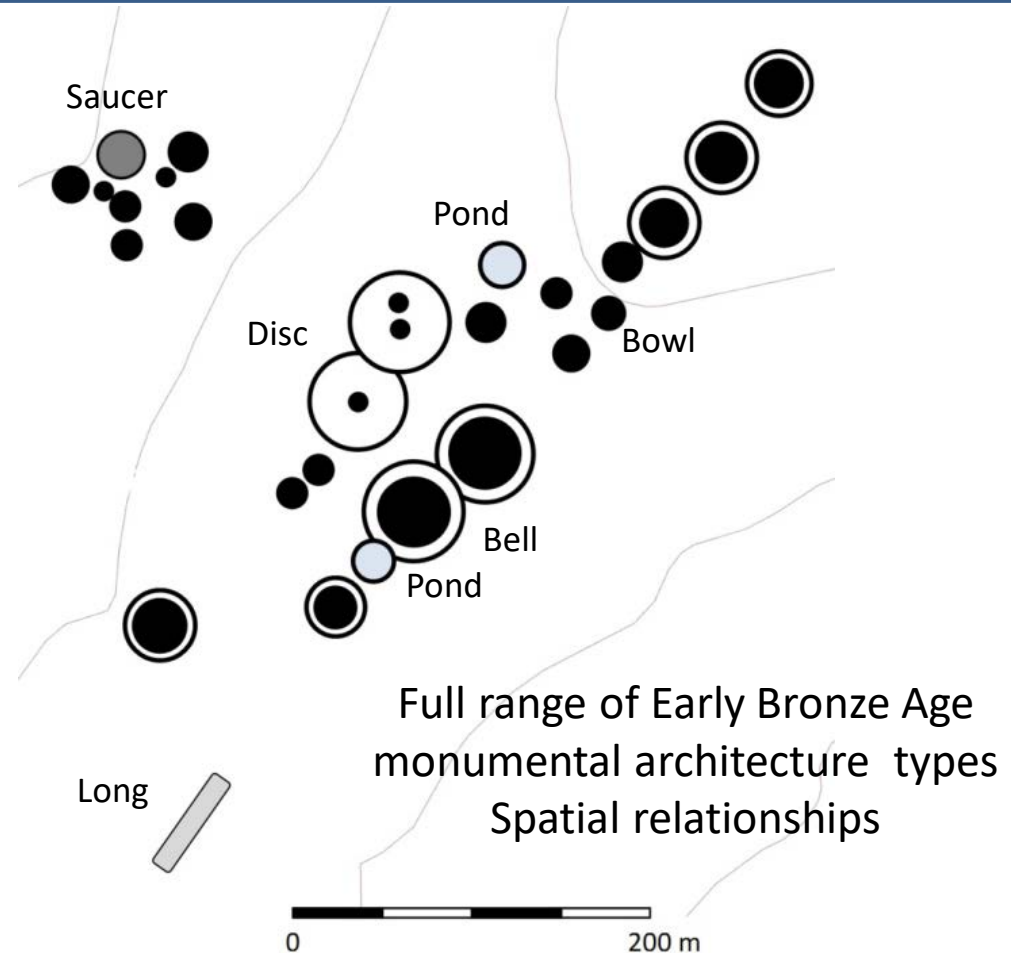
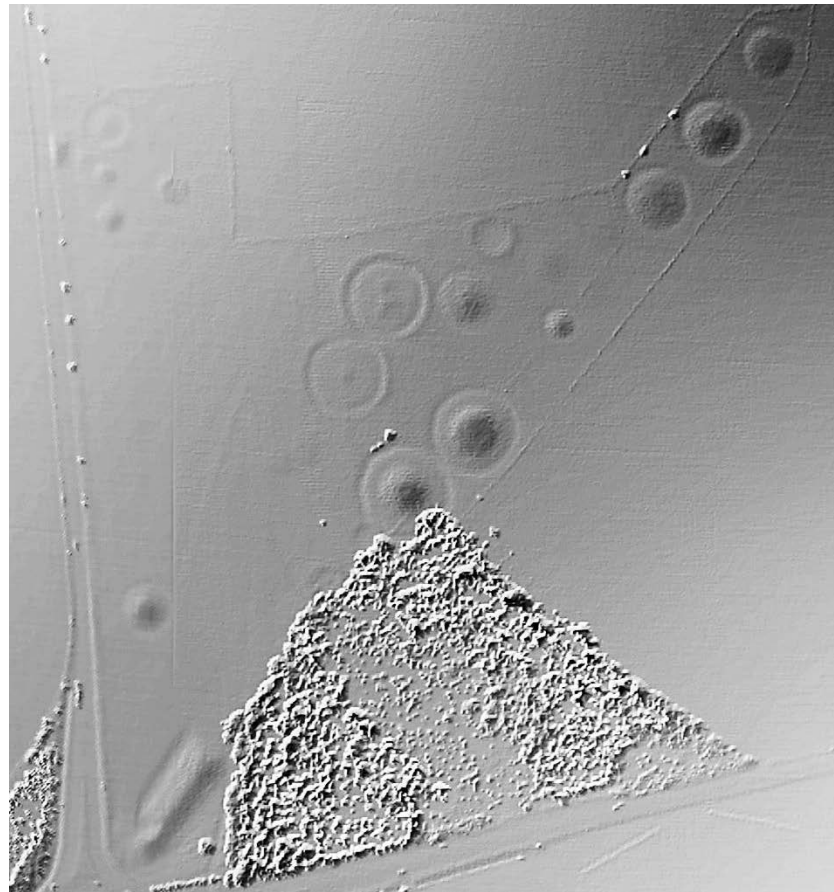
Attribute 5: The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other.

Attribute 6: The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel.



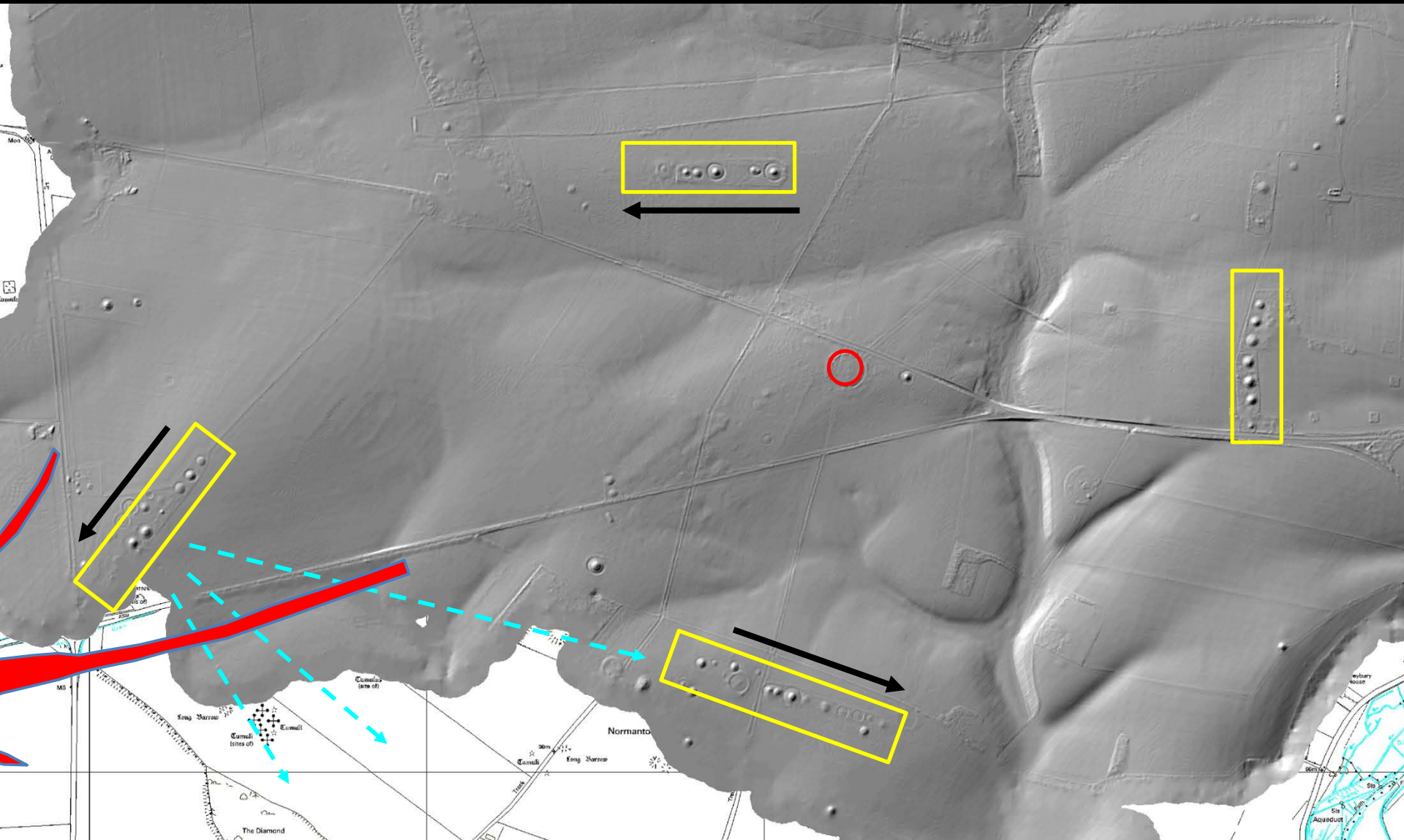
Winterbourne Stoke Crossroads

The WSC barrow group is unique:
the best-preserved Early Bronze Age
funerary complex in Europe



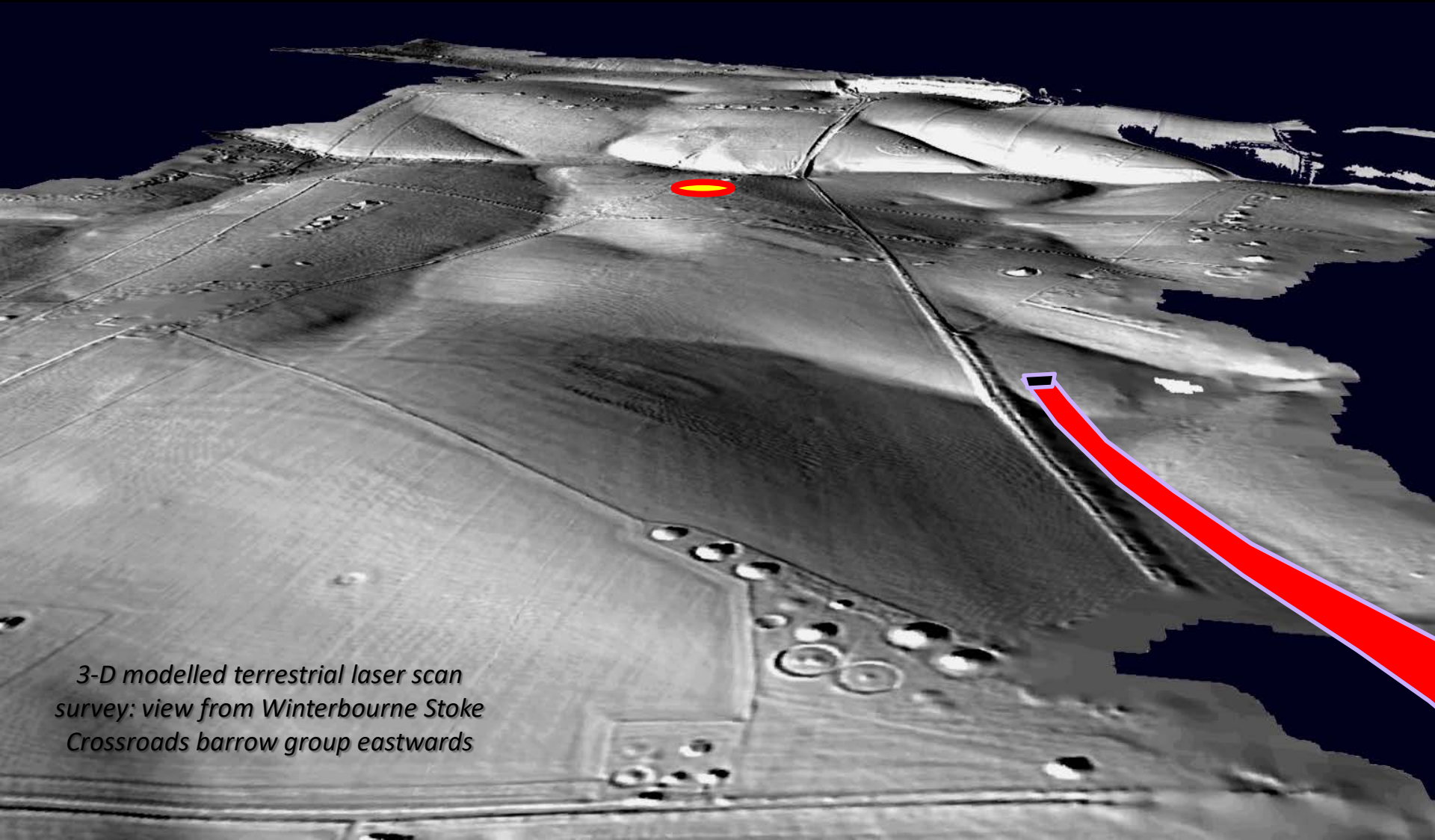
The Early Bronze Age funerary and ceremonial landscape

The Early Bronze Age landscape, c.1850—1600 BC, exemplifies the WHS OUV attributes in the most striking and dramatic manner



The Early Bronze Age funerary and ceremonial landscape

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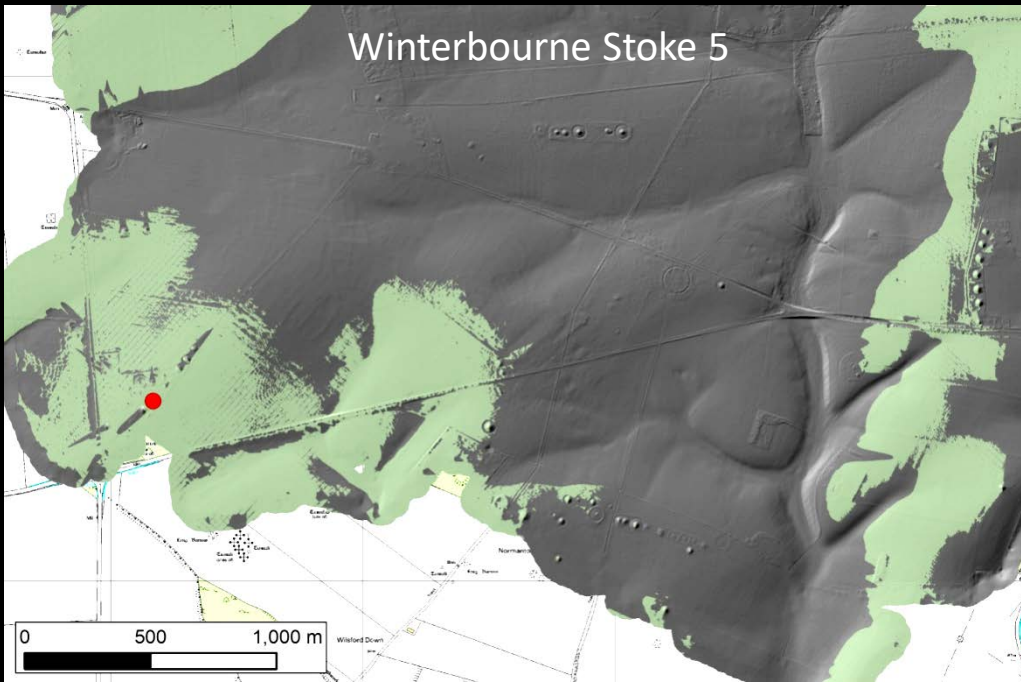


*3-D modelled terrestrial laser scan
survey: view from Winterbourne Stoke
Crossroads barrow group eastwards*

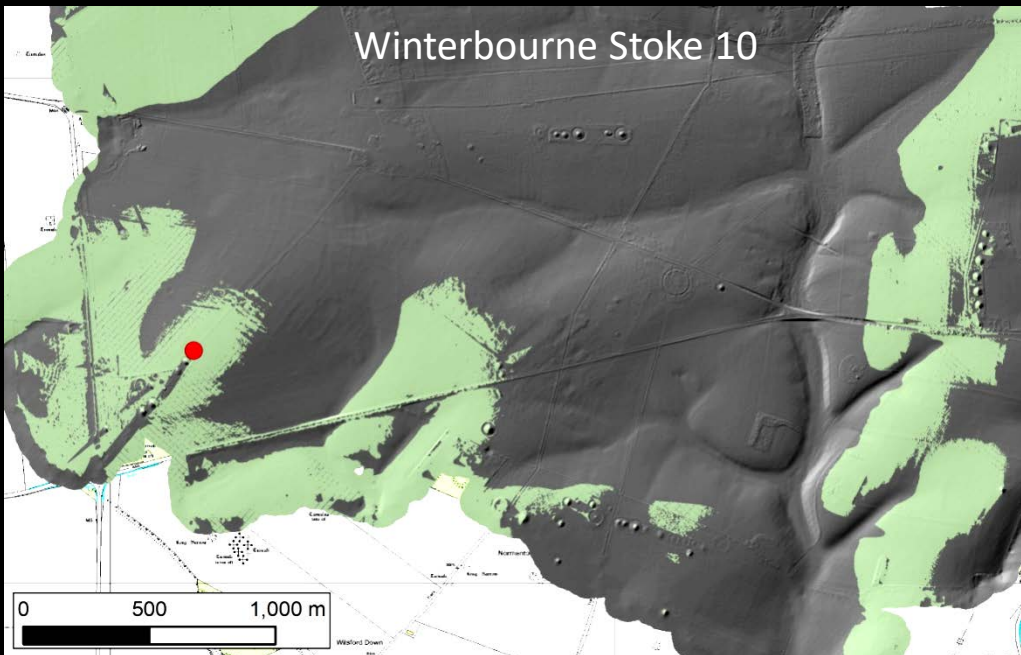
Impact of the proposed A303 scheme on the Winterbourne Stoke Crossroads barrow group and its landscape setting

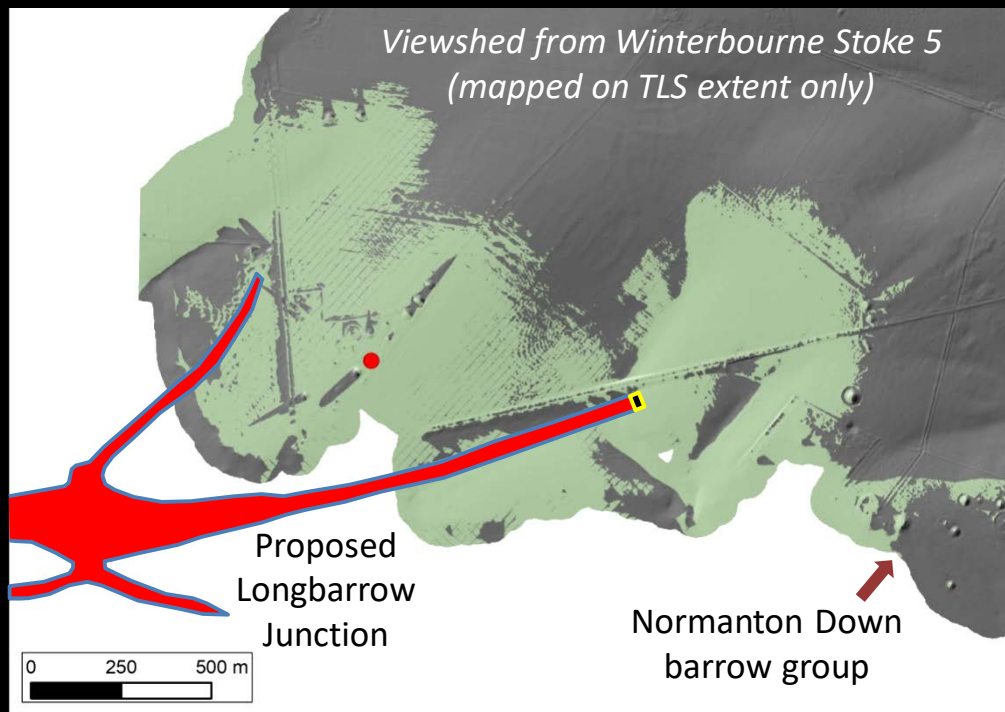
Visual relationships:
viewsheds mapped on to the
TLS model

Winterbourne Stoke 5



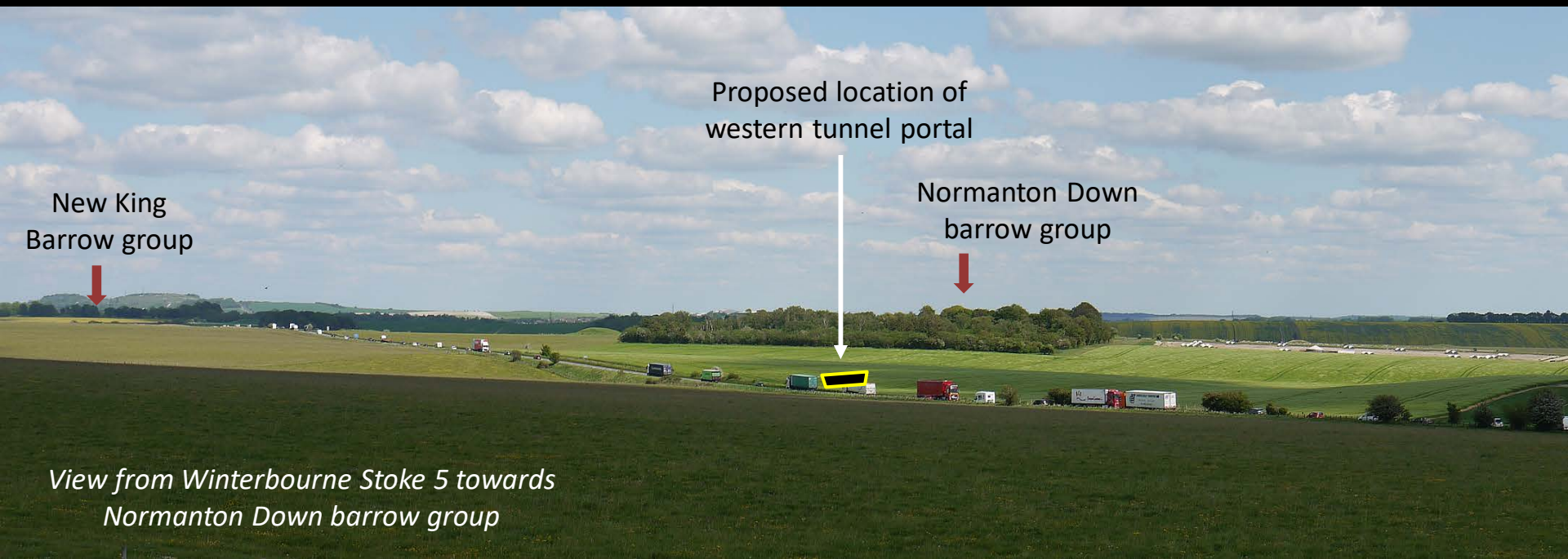
Winterbourne Stoke 10





Impact of the proposed A303 scheme on the Winterbourne Stoke Crossroads barrow group and its landscape setting

Visual relationships



Impact of the proposed A303 road scheme on the Winterbourne Stoke Crossroads barrow group, its landscape setting, and the WHS OUV

1. Claims that the scheme 'protects' the WHS OUVs are unconvincing and unsupported: the scale of destruction is very great (c. 10 ha. inside the WHS and c.20 ha. in the Junction area); it involves permanent alteration of terrain; and highly significant spatial and visual relationships are interrupted and their qualities altered detrimentally.
2. These permanent alterations to the landscape fundamentally compromise the OUV attributes with respect not only to the setting of an internationally significant monument group (in its own right), but also the relationships with other monuments that together form a coherent, uniquely-well-preserved Early Bronze Age sacred landscape.
3. If the road scheme is approved at all, it is recommended that the western tunnel is moved at least 1.5 kms to the west, to a point well outside the current WHS boundary.



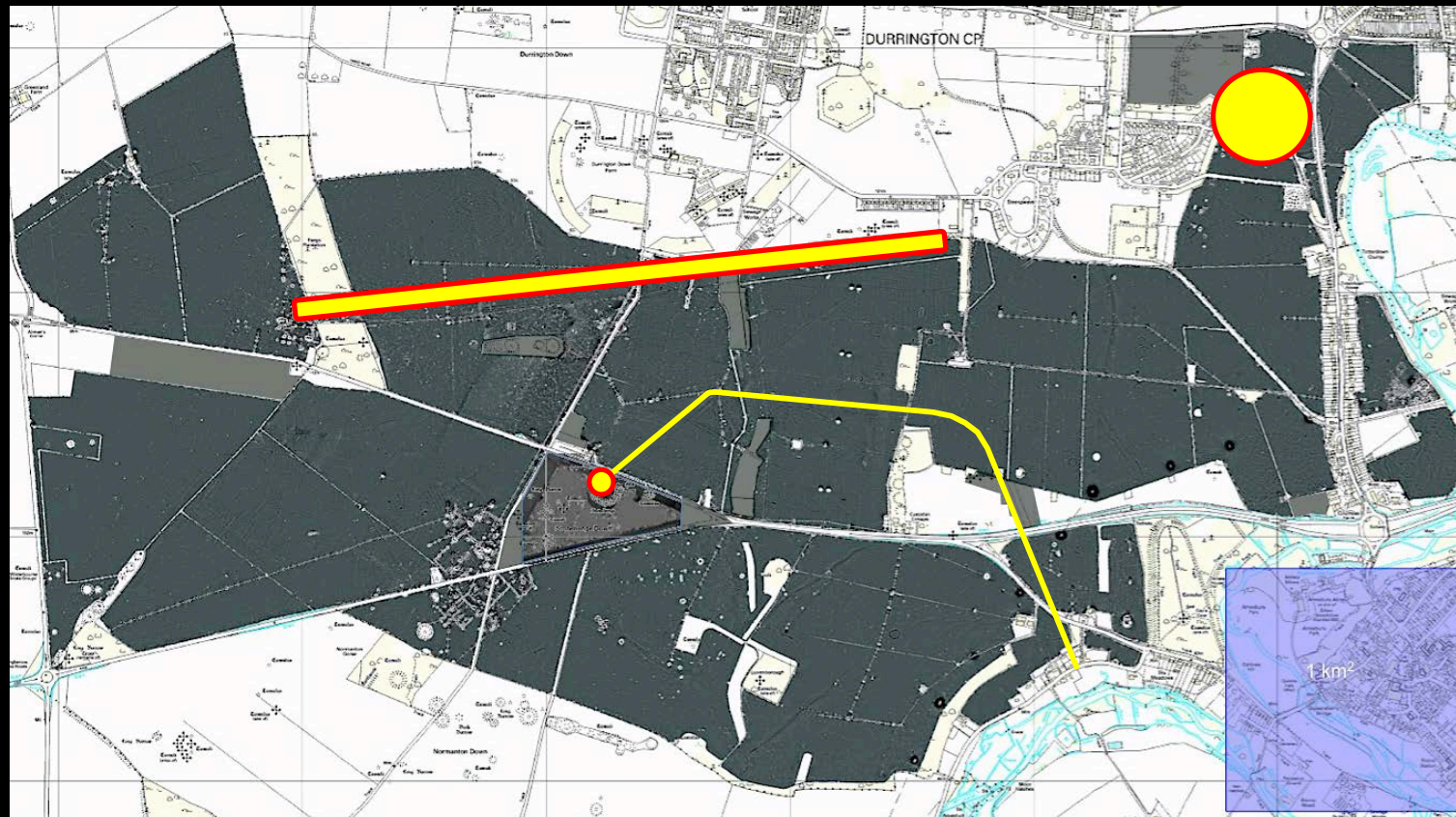
Recent large-scale geophysical and geoarchaeological surveys: Implications for present and future understanding of the World Heritage Site

Motorised large-scale geophysical survey

Multiple geophysical techniques

2-D and 3-D mapping of sub-surface features

Seamless terrain-modelled volumetric mapping of whole landscapes



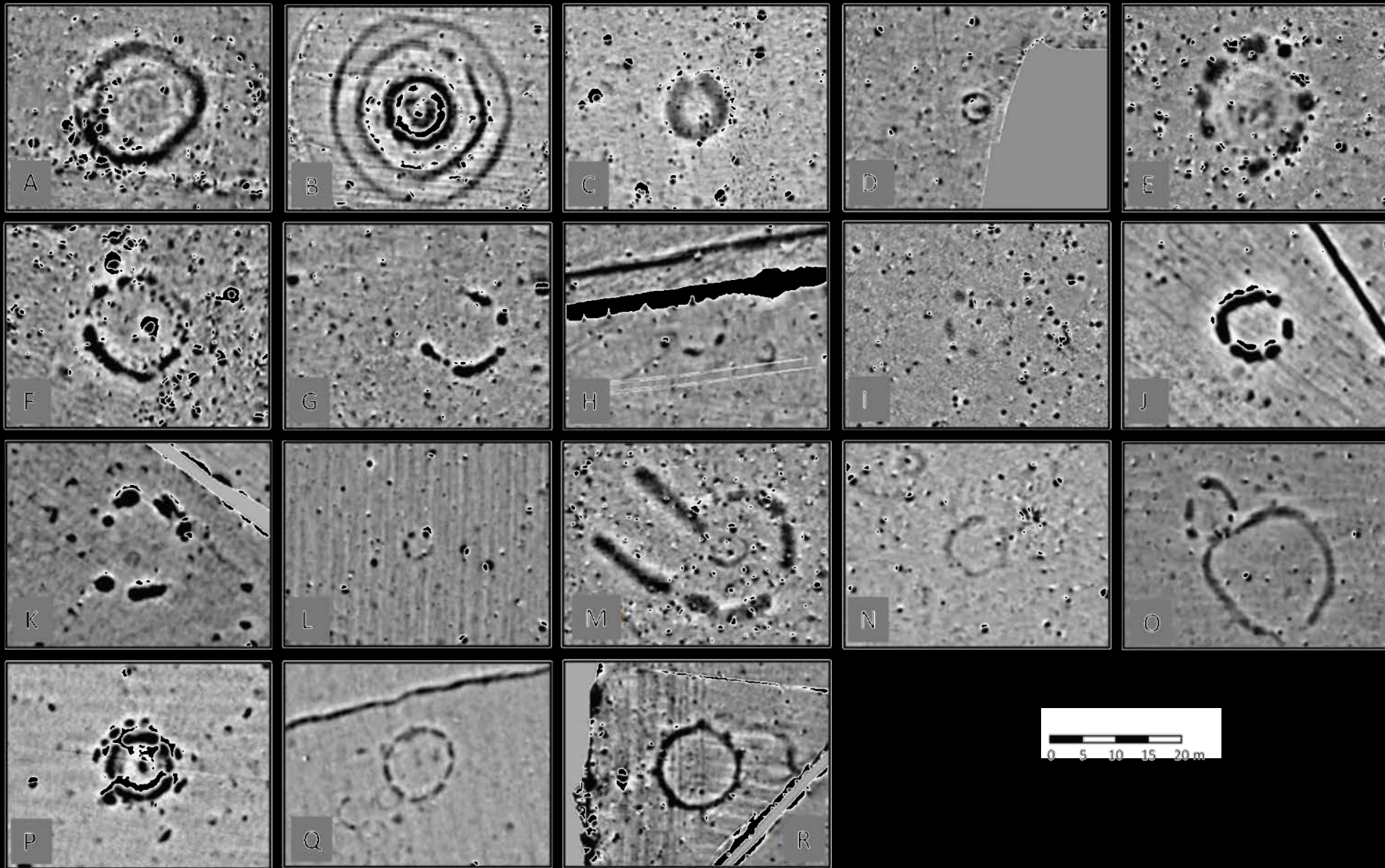
Stonehenge
Hidden
Landscapes
Project:
magnetometry
survey areas
2010-16

Stonehenge Hidden Landscapes: survey extents 2010-16

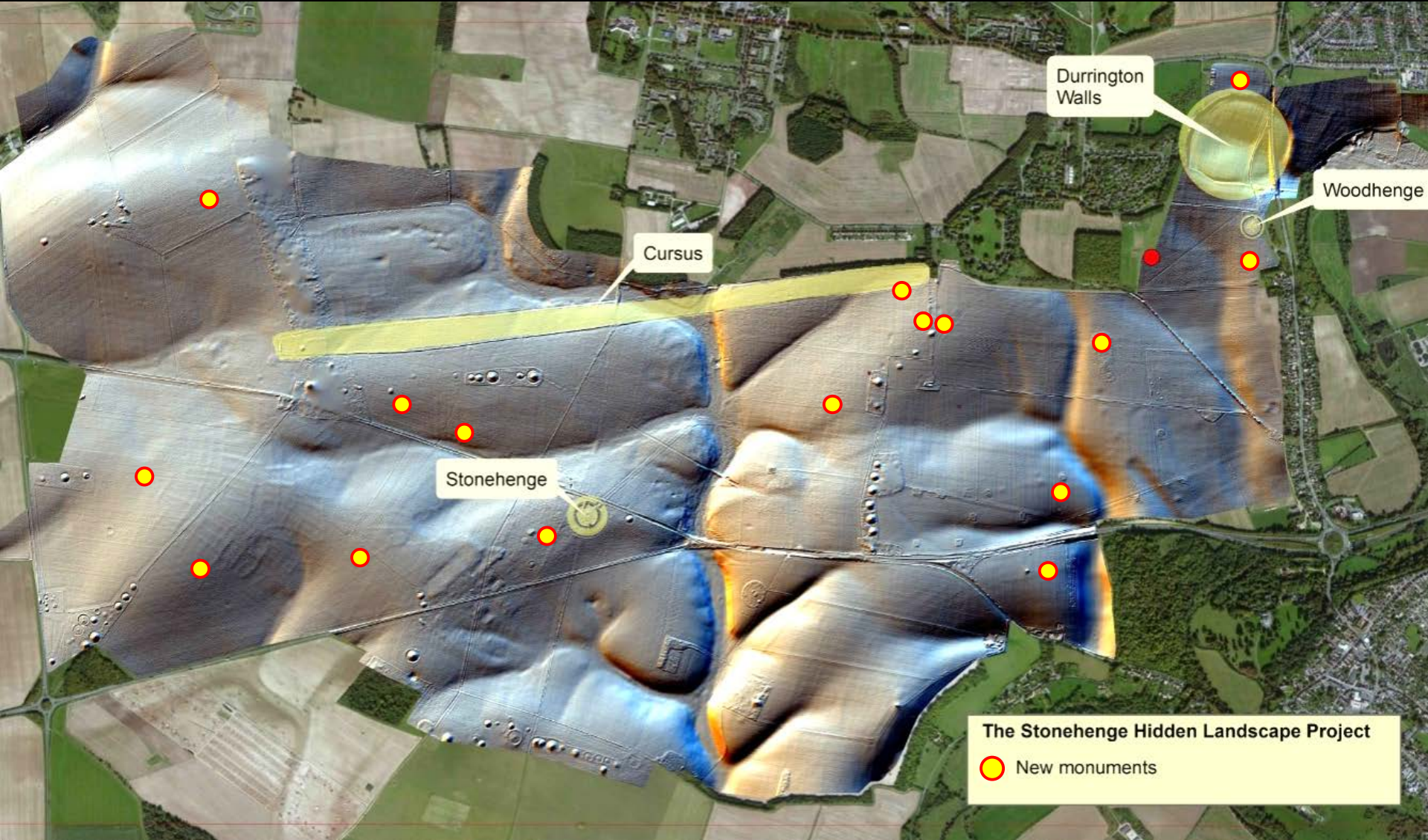


Option	Feature	Landscape	2010 Area (ha)	2011 Area (ha)	2012 Area (ha)	2013 Area (ha)	2014 Area (ha)	2015 Area (ha)	2016 Area (ha)	Total Area (ha)
Earth Resistance										
Twin	x	—	—	0.04	—	—	—	—	—	0.04
Square	x	—	0.32	—	—	—	—	—	—	0.32
Electrical imaging										
Campus Tigre RM	x	—	0.00	—	—	—	0.10	0.15	—	0.26
FlashRES64	x	—	—	0.34	—	—	—	—	—	0.34
Magnetometer										
CV Cart	x	—	—	3.83	—	—	—	—	—	3.83
FF Cart	x	x	15.10	—	5.00	15.00	—	—	—	35.10
FF Motorized	x	x	28.16	221.10	482.00	219.00	21.00	—	—	971.26
Bartington HH	x	—	4.40	—	—	1.20	—	—	—	5.60
GPR										
Mala Motorized	x	x	16.80	31.90	—	22.00	40.00	—	—	110.70
S&S Motorized	x	x	13.40	—	—	35.00	—	—	—	48.40
Single	x	—	2.40	1.00	1.00	1.50	0.82	1.35	0.99	9.06
EM										
EM31	x	x	0.54	—	—	—	—	—	—	0.54
EM38	x	x	—	—	—	—	—	0.16	—	0.16
Dualem motorized		x	—	—	21.00	22.00	153.00	100.00	—	296.00
CMD Mini Explorer	x	—	—	1.60	—	—	25.00	0.16	—	26.76
Laserscan										
Leica	x	—	2.30	3.30	0.50	1.00	1.75	2.36	2.61	13.82
Riegl	—	x	—	287.00	217.00	446.20	—	—	—	950.20
			83.4	550.1	726.5	762.9	241.7	104.2	3.6	2472.4
Geophysics			81.1	259.8	509.0	315.7	239.9	101.8	1.0	1508.4

Probable later Neolithic monuments: new discoveries

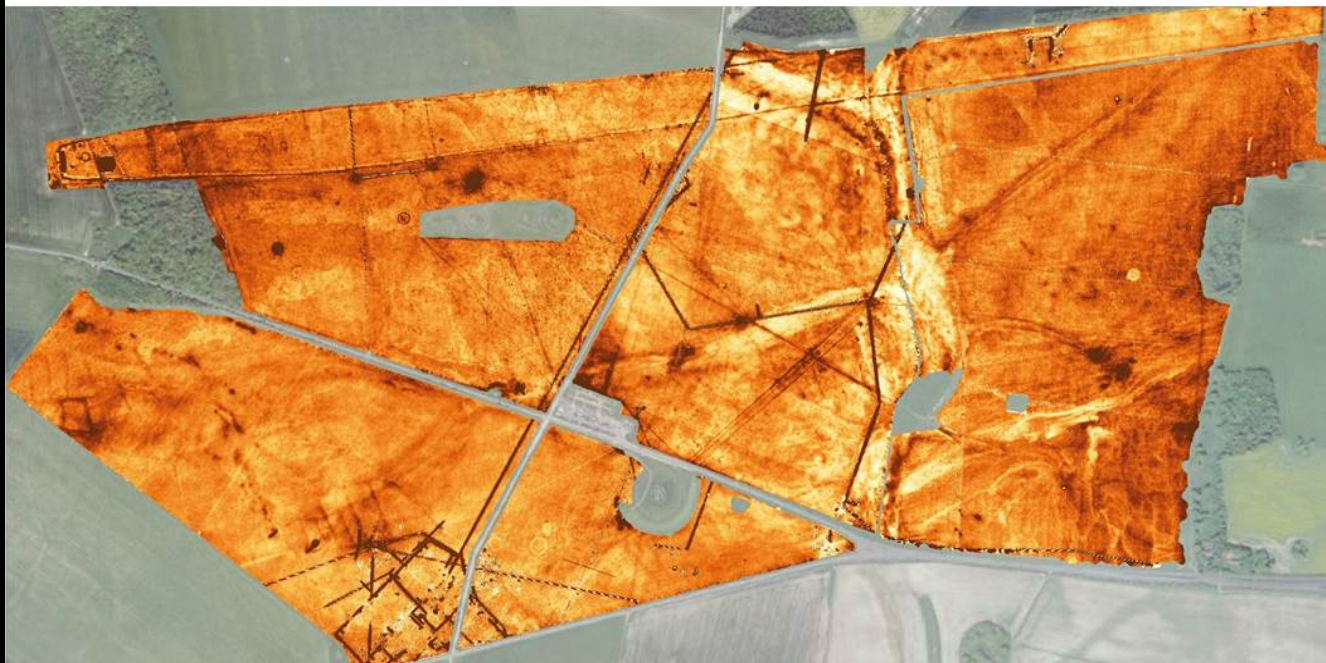


Probable later Neolithic monuments: new discoveries



Stonehenge Landscapes Electro- Magnetic Induction (SLE)

Geoarchaeological
Survey and
Excavation Project



SLE geoarchaeological excavations

Intensive sampling methodology



Recent large-scale geophysical and geoarchaeological surveys

Implications for present and future understanding of the World Heritage Site

1. Integration of multiple survey methods, which recover entirely different kinds of data (what is 'visible' in one is often not in another), should be a condition of geophysical surveys.
2. Demagnetization can render even large features invisible magnetically: this has major implications for the use of magnetometry, which most UK geophysical surveys rely on.
3. Development of geophysical techniques is a continuous process with unknown potential. Destruction of parts of the WHS will deny researchers access to potentially significant data.
4. Understanding the geophysical 'signatures' of features requires comparative excavation datasets from both anthropogenic *and* natural features
5. Even small-scale *intensive* excavation of certain feature types, or in areas that have been neglected, are providing major new insights into prehistoric activity within the WHS
6. The finite character of the heritage resource within the WHS, its research and management sensitivity, and the need for sustainability, demand the *highest* possible research-led recovery and recording of all possible data, and not just routine commercial method.

