

Table 1. MVPP study areas (Kent and Essex)

<i>County</i>	<i>Study area #</i>	<i>Study area name</i>	<i>Details</i>	<i>Resource/Palaeolithic Potential</i>
Kent	KT 1	Maidstone	Maidstone area and northwest of Maidstone, south of the North Downs escarpment	<ul style="list-style-type: none"> ● Extensive mapped fluvial terrace deposits and aggregate extraction ● Substantial recovered archaeological evidence
	KT 2	Medway Gap	Where the Medway crosses the North Downs	<ul style="list-style-type: none"> ● Aggregate deposits present and extracted, but as yet unmapped and uninvestigated ● Sparse archaeological evidence to-date, but includes key site of Cuxton
	KT 3	Rochester	Between Medway Gap and mouth of Medway	<ul style="list-style-type: none"> ● Group of mapped aggregate deposits in terrace sequence, some affected by extraction ● Key sites of Frindsbury and the Upnor elephant
	KT 4	Hoo Peninsula	Eastern half of Hoo Peninsula and the Isle of Grain	<ul style="list-style-type: none"> ● Extensive and well-mapped terrace suite of fluvial aggregate deposits ● Some archaeological recovery, despite limited investigations
Essex	EX 1	Rochford/Southend	South of the Crouch down to Thames Estuary and Canvey Island	<ul style="list-style-type: none"> ● Substantial areas of aggregate deposit and extraction ● Numerous isolated Palaeolithic finds, although no major sites to-date
	EX 2	Dengie Peninsula	Dengie Peninsula, between Rivers Blackwater and Crouch	<ul style="list-style-type: none"> ● Substantial areas of aggregate deposit, some extraction to-date ● Occasional Palaeolithic finds during v. limited investigation suggests potentially rich
	EX 3	Mersea Island	Block of ground west of mouth of River Colne	<ul style="list-style-type: none"> ● Substantial aggregate deposits, unextracted to-date ● Occasional finds, key faunal and palaeo-environmental site at Cudmore Grove, East Mersea
	EX 4	Clacton/Holland	Block of ground east of mouth of River Colne, and south of Weeley Heath	<ul style="list-style-type: none"> ● Substantial aggregate deposits, partly extracted ● Key area for Palaeolithic archaeology, type-site of Clactonian and abundant finds including wooden spear and faunal/palaeo-environmental remains

Table 2. Quaternary epochs and the Marine Isotope Stage framework

<i>Epoch</i>	<i>Age kBP</i>	<i>MI Stage</i>	<i>Traditional stage (Britain)</i>	<i>Climate</i>
Holocene	Present–10,000	1	Flandrian	Warm — full interglacial
Late Pleistocene	25,000	2	Devensian	Mainly cold; coldest in MI Stage 2 when Britain depopulated and maximum advance of Devensian ice sheets; occasional short-lived periods of relative warmth ("interstadials"), and more prolonged warmth in MI Stage 3.
	50,000	3		
	70,000	4		
	110,000	5a–d		
	125,000	5e	Ipswichian	Warm — full interglacial
Middle Pleistocene	190,000	6	Wolstonian complex	Alternating periods of cold and warmth; recently recognised that this period includes more than one glacial–interglacial cycle; changes in faunal evolution and assemblage associations through the period help distinguish its different stages.
	240,000	7		
	300,000	8		
	340,000	9		
	380,000	10		
	425,000	11	Hoxnian	Warm — full interglacial
	480,000	12	Anglian	Cold — maximum extent southward of glacial ice in Britain; may incorporate interstadials that have been confused with Cromerian complex interglacials
	620,000	13–16	Cromerian complex and Beestonian glaciation	Cycles of cold and warmth; still poorly understood due to obliteration of sediments by subsequent events
780,000	17–19			
Early Pleistocene	1,800,000	20–64		Cycles of cool and warm, but generally not sufficiently cold for glaciation in Britain

Table 3. Palaeolithic period in Britain

<i>Archaeological period</i>	<i>Human species</i>	<i>Lithic artefacts and other material culture</i>	<i>MI Stage</i>	<i>Date (BP)</i>	<i>Geological period</i>
Upper Palaeolithic	Anatomically modern <i>Homo sapiens sapiens</i>	Dominance of blade technology and standardised tools made on blade blanks Development of personal adornment, cave art, bone/antler points and needles	2–3	10,000–35,000	Late Pleistocene
Middle Palaeolithic	Early pre-Neanderthals initially, evolving into <i>Homo neanderthalensis</i> after OI stage 5e	Continuation of handaxes, but growth of more standardised flake and blade production techniques (Levalloisian and Mousterian) Development of a wider range of more standardised flake-tools, and towards the end, the development of <i>bout coupé</i> handaxes	3–5e	35,000–125,000	
			5e–8	125,000–250,000	Middle Pleistocene (later part of)
Lower Palaeolithic	Archaic Homo — <i>Homo cf heidelbergensis</i> initially, evolving towards <i>Homo neanderthalensis</i>	Handaxe dominated, unstandardised flake core production techniques and simple unstandardised flake-tools Occasional industries without handaxes, based on large flake blanks made by unstandardised core-reduction techniques	8–13	250,000–500,000	
	?? <i>Homo erectus/ergaster</i>	Very simple core and flake industries — one site on Norfolk coast at Pakefield	14–19	500,000–780,000	

Table 4. Palaeolithic sites in the MVPP study region (Kent)

<i>Study area</i>	<i>Survey</i>	<i>Region</i>	<i>Area</i>	<i>SRPP Map</i>	<i>No. sites</i>	<i>Key sites, notes</i>
KT 1	SRPP 2 *	4. South of the Thames	River Medway	M 4	16	<ul style="list-style-type: none"> ● Includes prolific gravel pits of Wagon's Pit, New Hythe Lane and Ham Hill ● Fresh condition Levalloisian material from New Hythe
KT 2	"	"	"	M 4	4	<ul style="list-style-type: none"> ● Fluvial site of Cuxton — many handaxes, as well as Levalloisian ● Other find-spots on east side of Medway possibly indicating unmapped aggregate deposits
				M 5	1	<ul style="list-style-type: none"> ● Probably derived material from Cuxton terrace site
KT 3	"	"	"	M 5	8	<ul style="list-style-type: none"> ● Frindsbury knapping floor site ● Includes site of Upnor elephant ● Several find-spots on east side of Medway in area mapped as Thanet Sand bedrock — possibly unmapped aggregate deposits
KT 4	"	"	"	M5	3	<ul style="list-style-type: none"> ● Includes Shakespeare Farm Pit, where <i>in situ</i> handaxe found in Terrace 3/Shakespeare gravel (Bridgland & Harding 1984)
				M 6	2	<ul style="list-style-type: none"> ● Found <i>in situ</i> in gravel pit in Terrace 2 gravel (Whittaker 1889)
				-	1	<ul style="list-style-type: none"> ● Allhallows Golf Course site, with diverse biological evidence (Bates <i>et al.</i> 2002)

* *Southern Rivers Palaeolithic Project: Report 2* (Wessex Archaeology 1993)

Table 5. Core national research themes

Aim	Details
N 1	Documentation of regional sequences of material cultural change
N 2	Dating of artefact-bearing deposits within regional, national and international Quaternary frameworks
N 3	Developing understanding and dating of regional Pleistocene environmental, climatic and litho-stratigraphic frameworks
N 4	Explanation of diachronic and synchronic patterns of material cultural variability
N 5	Behaviour of Archaic (pre-anatomically modern) hominids (a) at specific sites, (b) across the wider landscape
N 6	Behaviour of anatomically modern hominids (a) at specific sites, (b) across the wider landscape
N 7	Extent of contrasts in Archaic and anatomically modern human behaviour and adaptations, and in fundamental cognitive capacities
N 8	Patterns of colonisation, settlement and abandonment through the Pleistocene
N 9	The climatic and environmental context of Archaic settlement, and the relationship between climate/environment and colonisation
N 10	The history of isolation/connection between Britain and the continental mainland, and the relationship/implications for Palaeolithic settlement and cultural development/expression
N 11	Improved documentation and understanding of hominid physiological evolution
N 12	Investigation of the relationship between evolutionary, behavioural and material cultural change
N 13	Social organisation, behaviour and belief systems
N 14	Models for cultural transmission and learning
N 15	Improving models of Palaeolithic site formation and post-depositional modification

Table 6. MVPP objectives cross-referenced with national (N) and regional (R) research priorities

<i>Objective</i>	<i>National</i>	<i>Regional</i>
1 — Palaeolithic resource characterisation	N 1 N 4 N 8	R 3
2 — Palaeolithic resource distribution and framework	N 1 N 2 N 3 N 4 N 8	R 1 R 2 R 3
3 — Hominid settlement history and cultural development	N 1 N 4 N 8 N 10	-
4 — Key sites initiative	N 1 N 2 N 3 N 4 N 5 N 7 N 8 N 9	R 1 R 2 R 3
5 — Predictive Palaeolithic modeling	-	R 3
6 — Palaeolithic resource curation	N 1 N 4 N 8 N 10	R 1 R 2
7 — SMR/HER enhancement	-	R 3
8 — Education and community appreciation	-	-

Table 7. Project method elements

<i>Element</i>	<i>Focus</i>	<i>Details</i>
1	Data design and documentation	Development, in conjunction with county curators, of relational structure for lithic and site data recording, so as to be easily integrated into SMR and HER records
2	Collections study	Visiting museums to study existing collections
3	Geological data collection and modelling	Initial identification of terrace distribution and fieldwork sites
4	Dissemination and community engagement	Talks and demonstrations; school visits; web resource and leaflet
5	Fieldwork (ph. 1)	A systematic test pit investigation of key terrace deposits
	(ph. 2)	Investigation targeted at a number of key sites
	(ph. 3)	An intense investigation of one site
6	Specialist work and analyses	After initial assessment, specialist work took place in the following areas: <ul style="list-style-type: none"> - OSL dating - Molluscan analysis - Lithic analysis - Clast lithology - GIS development

Table 8. Artefacts studied from museum collections

<i>County</i>	<i>Region</i>	<i>Site</i>	<i>No. artefacts</i>	<i>Total</i>
Kent	KT 1	Aylesford (general)	114	371
		Boxley	56	
		Ham Hill Pits	29	
		Nickel/Nico Pits, Aylesford	12	
		Allington Lock, Maidstone	1	
		Bryce's Sand Pit, Aylesford	3	
		New Hythe Lane	141	
		Preston Hall Sand Pit	8	
		Silas Wagon's Pit, Aylesford	7	
	KT 2	Cuxton	1044	1048
		Ranscombe, Rochester	4	
	KT 3	Frindsbury Extra	500	600
		Gillingham	3	
		Gillingham Darland	20	
		Lower Lines, Chatham	75	
		Sharps Green, Gillingham	1	
		Frindsbury Church	1	
	KT 4	Hoo	6	8
		St. Mary Hoo	1	
		Stoke, Hoo	1	

Table 9. Stratigraphical data recorded in Rockworks database

TQ47NE198			
Grid ref.			
	545490	179650	
Elevation 1.45			
Total depth 28			
Depth top	Depth base	Description	keyword
0	1.05	made ground	Concrete
1.05	1.5	made ground	coal
1.5	3.1	silty clay	occ organics
3.1	5.4	peat	much plant material
5.4	6.2	peat	spongy amorphous
6.2	7.2	silty clay	soft
7.2	12.4	sandy gravel	very soft
12.4	13.2	sandy gravel	silty gravel
13.2	27.1	sandy silt	
27.1	28	sandy silt	occ flint gravel and chalk
28	30.5	Chalk	chalk
Depth top	Depth base	Stratigraphy	
0	1.5	Made ground	
1.5	7.2	Alluvium	
7.2	13.2	Gravel	
13.2	30.5	Bedrock	

Table 10. MVPP fieldwork, lithic analysis summary

<i>Site</i>	<i>Site Code</i>	<i>Site sub-division</i>	<i>Lithic material</i>
Cuxton	CXTN4 05	TP 1	One handaxe, one core and 19 debitage (mostly fresh or slightly abraded)
		TP 2	Twenty-six handaxes (mostly pointed/sub-cordate, including six ficrons and one cleaver), two cores, nine flake-tools and 65 debitage (mostly fresh or slightly abraded)
Newhall Farm	NHFM 05	TP 1	Four flakes, all technologically undiagnostic (three rolled, one fresh)
Upnor Training Ground	UPNOR 05	TP 1	Two flakes from sieving of basal gravels, one large; both unpatinated and sl. rolled; undiagnostic technologically, although larger one hints of Levalloisian-ish approach
Clubb's Pit, Isle of Grain	CLBG 05	S 1	Large chunk of non-descript knapped flint (abraded)
Whittings Farm	WHTT 05	TP 3	One small waste flake (well-abraded)
Whitehouse Farm	WTHF 05	TP 9	Levallois core; small but well-formed (mod. abraded)

Table 11. OSL dating results from Kent sites

Field code	Lab code	OSL age estimate (ka)
MLF 05-01	X2478	181.55 ± 13.68
CLBG 05-01	X2553	196.10 ± 14.14
CLBG 05-03	X2555	143.33 ± 13.20
CLBG 05-05	X2557	147.52 ± 13.78
CXTN4 05-01	X2559	1.88 ± 0.30
CXTN4 05-03	X2561	232.64 ± 13.75
CXTN4 05-05	X2563	197.54 ± 17.09
KMP 05-02	X2566	77.23 ± 4.47
NHFM 05-01	X2580	72.63 ± 5.68
RHLLF 05-01	X2582	137.34 ± 9.17
WTHF 05-02	X2588	153.82 ± 11.60
DGFM 05-03	X2589	183.92 ± 14.94
MCKY 05-01	X2591	142.59 ± 11.46
NHL 05-01	X2672	300.16 ± 29.23
RHLLF 05-05	X2674	268.64 ± 29.64
SLM 05-02	X2677	206.45 ± 15.30

Table 12. Digital resources for the GIS *Palaeolithic Resource Predictive Model* (PRPM) for direct delivery to KCC

<i>File type/group</i>	<i>Files</i>	<i>Worksheets</i>	<i>Details</i>
Excel spreadsheet	GIS (KT-extra).xls	KT events	Attributes #1-43 for each Kent field event, as described Table 16
		KT zones	Attributes #1-18 for each Palaeolithic zone, as described Table 17
		KT (full MVPP events)	Individual test pit locations and attributes from MVPP field events
		KT (full Cuxton events)	Separate lithic data for different test pits from previous Cuxton events
		Sources (full ref)	Full references for sources given in KT events field # 15
GIS project files	MVPP_Kent_Events.dbf MVPP_Kent_Events.lyr MVPP_Kent_Events.prj.txt MVPP_Kent_Events.shp MVPP_Kent_Events.shx MVPP_Kent_Events_v8dot3.lyr MVPP_Kent_Zones.dbf MVPP_Kent_Zones.prj.txt MVPP_Kent_Zones.sbn MVPP_Kent_Zones.sbx MVPP_Kent_Zones.shp MVPP_Kent_Zones.shx MVPP_Kent_Zones8dot3.lyr		
Miscellaneous supporting	Shapes.zip		

Table 13. Paper archive from fieldwork

<i>Category of material</i>	<i>Kent</i>	<i>Essex</i>	<i>Intensive survey</i>
Site index	4	4	1
Site layout/location maps	33	21	6
Site investigation summary sheets	22	24	-
Test pit logs, section drawings	60	36	43
Borehole logs	3	18	-
Sediment sample record sheets	10	21	-
OSL sample record sheets	12	13	-
Finds record sheets	10	6	1
Digital photo record sheets	17	13	2
Survey sheets	13	-	5
Notes (by site)	106	4	18
Notes (non-site specific)	25	26	10
Total	315	186	86

Table 14. The Quaternary sequence in the lower reaches of the Medway [showing lithostratigraphic sequence and suggested correlations with Thames formations and with chronostratigraphic, climatic and marine isotope (MI) stages (modified from Bridgland 2003)]

Terrace formation: Maidstone Medway	Terrace formation: Medway	Interglacial deposits (channels)	Members: Lower Thames	Age	Climate	MI Stage
Terrace 1	Tilbury Halling		Tilbury Shepperton	Holocene late Devensian	warm cold	1 late 2
Aylesford Upper (Terrace 2)	Aylesford Upper		East Tilbury Marshes Upper	Devensian	cold	5d-2
Aylesford Lower (Terrace 2)	Aylesford Lower Binney Upper	?Kingsnorth deposits	Trafalgar Square deposits East Tilbury Marshes Lower Mucking Upper	Ipswichian intra-Saalian intra-Saalian	warm cold cold	5e late 6 6
Terrace 3	Binney Lower	?Allhallows deposits	Aveley Silts and sands Mucking Lower Botany	intra-Saalian intra-Saalian intra-Saalian	warm cold cold	7 late 8 8
Terrace 4	Stoke (Grain Gravel*)	?Allhallows deposits	Purfleet deposits	intra-Saalian	warm	9
?Terrace 5	Shakespeare Newhall?		Little Thurrock Orsett Heath Upper Swanscombe interglacial deposits Orsett Hearth Lower	intra-Saalian intra-Saalian Hoxnian	cold cold warm	late 10 10 11
	Dagenham Farm/Chalkwell/Caidge Clinch Street/Canewdon/St. Lawrence High Halstow/Belfairs/Mayland		St. Osyth Wivenhoe Ardleigh	late Anglian Anglian Anglian pre-Anglian Cromerian complex	cold cold cold c/w/c c/w/c	late 12 12 12 14-12? ?

* The Grain Gravel (present on the Isle of Grain) is a Thames not Medway deposit and is equivalent to the Corbets Tey Terrace of the Lower Thames. Two alternative sequences for the Medway Terrace formation are included; those shaded grey follow Bridgland 2003, those unshaded follow MVPP in which we have re-instated the Newhall Gravel originally defined in Bridgland (1985).

Table 15. Traditional terrace units compared with those identified in the MVPP

Terrace formation: Maidstone Medway (BGS)	Terrace formation: Maidstone Medway (MVPP)	Terrace formation: North Downs Gap (BGS)	Terrace formation: North Downs Gap (MVPP)	Terrace formation: Hoo Peninsula (Bridgland)	Terrace formation: Hoo Peninsula (MVPP)	MIS?
	A				Z	MIS 2-4
			A/B		Y	
Terrace 1	B		B		X	?5a-d
	C		C		W	
Terrace 2	D		D	Binney	V	
			D/E (Cuxton)	Stoke	U	MIS 7?
Terrace 3	E	Terrace 3	E	Newhall Farm	T	MIS 9?
Terrace 3-4	F			Shakespeare Farm	S	
Terrace 4	G			Dagenham Farm	R	
Terrace 5	H			Clinch Street	Q	
	I			High Halstow	P	

Table 16. Data recorded for Palaeolithic sites in MVPP GIS *Palaeolithic Resource Predictive Model*

#	Field	Field entry	Notes
1	F_EVENT	Unique code for fieldwork event	Different codes for different events at same site
2	OLD_EVENT	Previous event codes within MVPP museum collection recording	
3	EV_SUB_DIV	Different test pits, contexts or site areas within same main event	
4	KT [or EX]_REG MVPP sub-region	1, 2, 3 or 4	One of MVPP sub-regions 1–4 in Kent (KT) or Essex (EX)
5	ORIGIN	SRPP ERPP SMR/Grey MVPP Lit	Just one of these options
6	SITE_NAME	Text with name of site	
7	VOL	Southern or English rivers Project volume	
8	MAP	Map number from Southern or English rivers Project volume	Eg. B&C 5 [Blackwater & Chelmer 5]; where MVPP fieldwork has taken place at an SRPP site (eg. Cuxton) still put in SRPP info
9	F_SPOT	Find-spot ID within SRPP/ERPP map	Eg. 11 [Clacton, Holland-on-Sea]
10	SMR_NO	KCC/ECC Sites and monuments record ID	
11	NGR_E	6-figure grid reference (easting)	
12	NGR_N	6-figure grid reference (northing)	
13	ACC	Accurate Estimated General	Just one of these options
14	EV_TYPE	Collection Controlled collection Excavation	Just one of these options
15	SOURCES	Author/date for relevant primary sources	Relational with separate table of sources
16	MVPP_EX	Whether extant lithic material located and examined for MVPP	Yes or no
17	ART_AB	0 — None 1 — Single 2 — Several (2–10) 3 — Abundant (>10)	Just one of these options
18	HA	Number of handaxes (including rough-outs)	Based on collections and sources, not all necessarily extant

19	HA(bc)	No. of <i>bout coupé</i> handaxes reported/seen	Based on collections and sources, not all necessarily extant
20	C	Number of cores (<i>except</i> Levallois)	Ditto
21	LEV	Number of Levallois (flakes and cores combined)	Ditto
22	FT	Number of flake-tools, retouched flakes (<i>except</i> Levallois)	Ditto
23	DEB	Number of debitage	Ditto
24	TRAD (Cultural/industrial tradition)	ACH — Acheulian CLAC — Clactonian LEV — Levalloisian BM — British Mousterian (<i>ie. bout coupé</i>) UP — Upper Pal LB — Long Blade UN — Unassigned	Normally would expect to have none or one of these, but can list more than one if needs be, divided by semicolon
25	P_PERIOD (Palaeolithic period)	L/M Pal Mousterian Upper Pal	750,000–125,000 BP 125,000–40,000 BP 40,000–10,000 BP As for above, normally would expect to have just one of these, but can list more than one if needs be, divided by semicolon
26	BIO_SUM (Zoological remains combined summary)	0–10	Score for presence/abundance/diversity of remains, based on sum of each of five individual zoological remains fields 26–30
27	L_MAMM (Large mammals)	0 — None 1 — Scarce/poor condition 2 — Common/well-preserved	
28	SV (Small vertebrates)	Ditto	
29	MOLL (Molluscs)	Ditto	
30	OCF (Ostracods/ foraminifera)	Ditto	
31	PD (Pollen/diatoms)	Ditto	
32	CONTEXT (context/provenance of find/bio remains)	Text name or bed number of stratigraphic context	

33	GEO_ATTRIB (Geological attribution, class of deposit)	Fluvial complex Colluvial/solifluction Residual/Clay-with-flints Residual/derived Aeolian Lacustrine Raised beach complex Intertidal/estuarine Glacigenic Fluvio-glacial	Normally would expect to have just one of these, but can list more than one if needs be, divided by semicolon
34	GEO_PERIOD (Geo period)	Pre-Anglian Anglian Hoxnian/Saalian Last interglacial Devensian Holocene Unknown	Normally would expect to have just one of these, but can list more than one if needs be, divided by semicolon
35	DIST (Depositional disturbance/transport)	?? — Unknown Very — Highly disturbed Mod — Slightly disturbed Min — Essentially undisturbed	A site can have "Yes" for none, any or all of these, depending upon range of material and deposits present, divided by semicolon
36	INTEG (Stratigraphic integrity)	0 — Unknown 1 — Low 2 — Moderate 3 — High	Ditto
37	EH_RARE Rarity (after English Heritage MPP criteria)	1 — Commoner than average 2 — Average 3 — Rarer than average	Bearing in mind an amalgam of: period, typology/technology, region, class of deposit, spatial and stratigraphic integrity
38	EH_FRAG Fragility/vulnerability (after English Heritage MPP criteria)	1 — Less fragile/vulnerable than average 2 — Average 3 — More fragile/vulnerable than average	1 — Deposits abundant and unthreatened 2 — Deposits of average extent and stability 3 — Restricted deposits vulnerable to erosion or development
39	EH_DIV Diversity (after English Heritage MPP criteria)	1 — Less range of material than average 2 — Average 3 — Greater range of material than average	1 — Single artefacts or categories of artefacts 2 — More than one type of artefact within a category; more than one category of artefact 3 — Multiple examples of different types of artefact within more than one artefact category

40	EH_STRAT Stratigraphic depth (after English Heritage MPP criteria)	1 — Uncertain provenance of artefacts 2 — Artefacts/zoological remains reliably provenanced to a specific horizon 3 — Significant remains from more than one stratigraphically related horizon	
41	EH_DOC Documentation (after English Heritage MPP criteria)	1 — No records of investigation 2 — Average records 3 — Good records of provenance and investigation	
42	EH_GRP Group value (after English Heritage MPP criteria)	1 — No group value 2 — Average 3 — High group value	
43	ART_SUMM	Text summary of any lithic artefactual material	Based on either direct recent re-examination of material by MVPP, or published sources

Table 17. Attributes for Palaeolithic assessment zones

#	Field	Field entry	Notes
1	MVPP_ZONE	MVPP [KT/EX]_nn	Unique MVPP identifier
2	GEOMORPH_SIT	Short text	Description of geomorphological and topographic situation
3	GEO_SOLID (Bedrock)	Short text	Description of solid geology bedrock characteristics
4	GEO_DRIFT	Short text	Description of Pleistocene sediment characteristics
5	PAL_SUMM	Short text	Summary of Palaeolithic artefactual and zoological remains
6	GEO_PERIOD (Geo period/s for any Pleistocene deposits)	Pre-Anglian Anglian Hoxnian/Saalian Last interglacial Devensian Holocene	Normally would expect to have just one of these, but can list more than one if needs be
7	PAL_PERIOD (Pal period/s)	Lower/Mid Pal (750,000–125,000 BP) Brit Mousterian (125,000–40,000 BP) Upper Pal (40,000–10,000 BP)	Normally would expect to have just one of these, but can list more than one if needs be
8	F-SPOT_DENSITY (Density of sites)	nn	No. of sites per km ² with one or more artefacts in zone (auto-calculated GIS)
9	F-SPOT_ABUND (Abundance of sites)	0 — None 1 — Less than average number of artefact find-spots 2 — More than average number of artefact find-spots	Auto-calculated GIS; NB – zones with no artefacts are ignored when calculating average
10	BIO_DENSITY	nn	No. of sites per km ² with zoological remains in zone (auto-calculated GIS)
11	BIO_ABUND	0 — None 1 — Less than average number of zoological remains find-spots 2 — More than average number of zoological remains find-spots	Auto-calculated GIS; NB – zones with no zoological remains are ignored when calculating average
12	PAL_TRADS (L/M Pal cultural/industrial traditions)	ACH - Acheulian CLAC - Clactonian LEV - Levalloisian BM - British Mousterian (ie. <i>bout coupé</i>) UP - Upper Pal LB - Long Blade UN - Unassigned	Summary list of range of different Palaeolithic cultural traditions present in zone, divided by semicolon
13	PAL_DIVERSITY (L/M Palaeolithic cultural diversity)	0 – none 1 – just one of above 2 – any two of above 3 – any three of above <i>etc.</i>	Sum of range of different types of cultural/industrial tradition present in zone, including "UN" as a type

14	AUTO_IMP (Automatic GIS-generated assessment of importance)	3 – High	Both artefacts and zoological remains present in zone; or, (findspot abundance)*(Pal diversity) >= 3
		2 - Medium	Either artefacts or zoological remains present in zone
		1 - Low	Neither artefacts nor zoological remains present in zone
15	LIKELY_IMP (Likely importance/potential)	3 - High 2 - Medium 1 – Very low ?? - Unknown 0 - None	Likelihood of finding important Palaeolithic/zoological remains — see below *
16	POSS_IMP (Possible importance)	Short text	Flags up unlikely but highly significant possibilities, such as pre-Anglian evidence in high-level gravels
17	RESEARCH OBJECTIVES (Key research Questions)	Short text, or: N 1–n R 1–n	Short text; or lists in relation to associated tables of national/regional Palaeolithic research questions
18	APPROACHES TO INVESTIGATION (Key approaches to investigation)	Text or list from: 1 — Stratigraphic recording 2 — Environmental sampling 3 — Sieve-sampling for artefacts 4 — Open-area excavation 5 — Watching brief for Pleistocene deposits and/or Palaeolithic remains 6 — boreholes ?? Others	List none, any or all of possible intervention approaches

*** Note on importance/potential**

This is a judgement based on a combination of two criteria: (a) the *likelihood* of finding Palaeolithic remains; and (b) the likely *importance* of any remains that are present. Note that the concept of zero potential or likelihood is omitted — it is the opinion of this writer that there is always a tiny possibility of finding important remains even in very unlikely situations. A crude tabular summary of how *likelihood* and *importance* are combined to reach potential is given below:

<i>Potential</i>	<i>Likelihood</i>	<i>Likely importance</i>
Very low	Very unlikely	Low, moderate or high
	Low	Low
Low	Moderate	Low
	Low	Moderate
Moderate	Low	High
	Moderate	Moderate
	High	Low
High	Moderate	High
	High	Moderate
Unknown	Unknown	Low, moderate or high
	Low, moderate or high	Unknown

Table 18. Palaeolithic remains and relevant information

<i>Category</i>	<i>Range</i>	<i>Eg., Comments</i>
Human activities/artefacts	Lithic artefacts	Flaked stone tools and debitage, percussors
	Wooden artefacts	Spears, tool-hafts
	Bone/antler artefacts	Percussors, handaxes (known from Italy from elephant bone)
	Cut-marked faunal remains	
	Decorated/carved objects	Generally Upper Palaeolithic, but not out of the question for Lower/Middle Palaeolithic
	Cave art	Upper Palaeolithic only
	Manuports	Unused raw material
	Features, structures	Hearths, stone pavements, pits
	Fire	Charcoal concentrations in association with hearths
Biological/palaeo-environmental	Large vertebrates	Mammals (rhino, elephant, lion, deer horse, carnivores, etc.) birds
	Small vertebrates	Mammals (bats, mice, voles, lemmings etc.), fish, reptiles, birds, amphibians
	Plant macro-fossils	
	Pollen and diatoms	
	Molluscs	
	Insects	
	Ostracods and foraminifera	
Intrinsic sedimentological	3D location	Geometry, morphology, landscape context
	Sediment description	
	Sedimentary structures	Bedding, faulting, post-depositional distortion
	Sand bodies	Potential for OSL dating
	Clast lithology	
	Heavy mineral content	

Table 19. English Heritage criteria for Palaeolithic importance

<i>Criterion</i>	<i>Notes</i>
<ul style="list-style-type: none"> Any human bone is present 	<p>The only Lower/Middle Palaeolithic remains from Britain are:</p> <ul style="list-style-type: none"> one partial skull (occipital region) from Swanscombe two incisors and a shin bone (two individuals) from Boxgrove molar tooth from Pontnewydd (Wales)
<ul style="list-style-type: none"> Palaeolithic remains in primary undisturbed context 	<p>There are about a dozen British sites with undisturbed Palaeolithic remains. Less than half have both faunal and lithic remains, and have had areas of more than a few square metres excavated (cf. Wenban-Smith 2004)</p>
<ul style="list-style-type: none"> Remains from a period or geographic area where evidence is rare or previously unknown 	
<ul style="list-style-type: none"> Organic artefacts 	<p>The only organic artefacts known from Britain from the L/M Palaeolithic are a wooden spear-point from Clacton and bone and antler percussors from Boxgrove</p>
<ul style="list-style-type: none"> Well-preserved associated biological/palaeo-environmental evidence 	<p>These are important on two counts:</p> <ul style="list-style-type: none"> May provide direct behavioural/dietary information Provide environmental/climatic/biostratigraphic data
<ul style="list-style-type: none"> Evidence of lifestyle 	<p>Can include cut-marked faunal remains, particular topographic situation, artefacts when interpreted in light of their context/distribution</p>
<ul style="list-style-type: none"> Remains from different stratigraphic horizons 	
<ul style="list-style-type: none"> Artistic evidence 	<p>Can include decorated/carved objects and rock-art. Not presently known before the Upper Palaeolithic, although should not be ruled out as a possibility for earlier periods</p>
<ul style="list-style-type: none"> Evidence of hearths or structures 	<p>No evidence in Britain before the Upper Palaeolithic, but might be expected for the Middle Palaeolithic</p>
<ul style="list-style-type: none"> Site can be related to exploitation of a particular resource 	<p>For instance raw material source, cave/rock-shelter, lake</p>
<ul style="list-style-type: none"> Artefacts are abundant 	<p>No absolute guidelines on how abundance should be assessed. Needs to be considered together with level of investigation. If limited investigation, even low numbers of artefacts may indicate abundance</p>