[illegible]

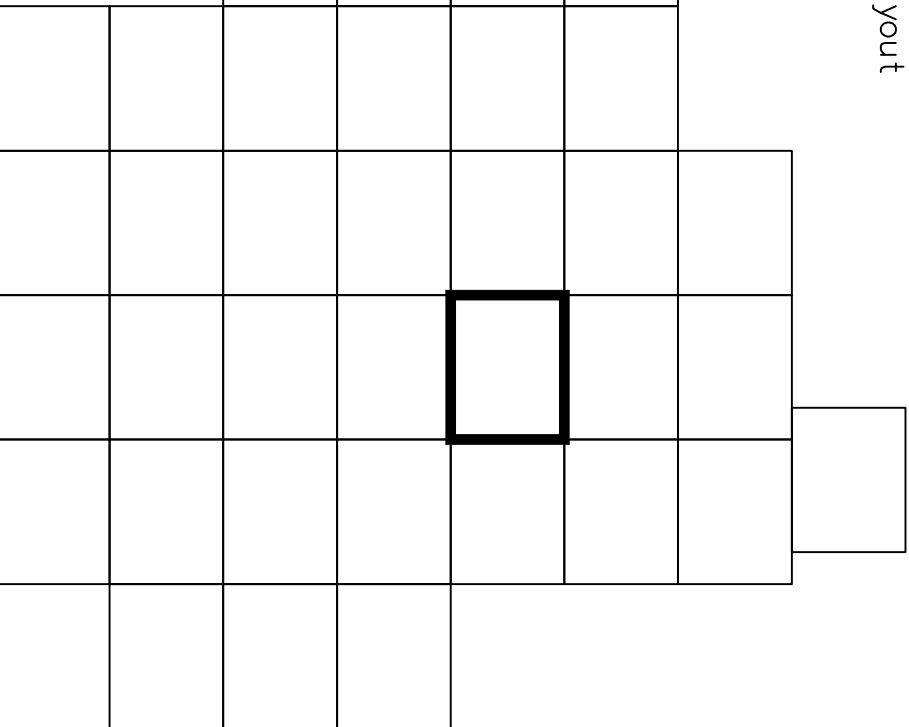




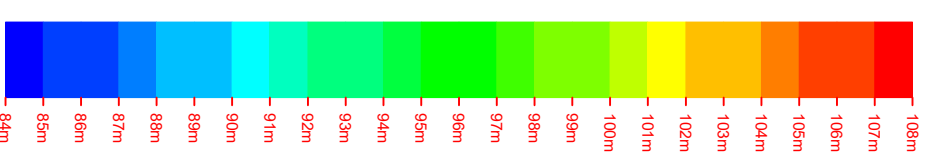
## Topographical Abbreviations

[illegible]

## Sheet Layout



Contours Color Map:

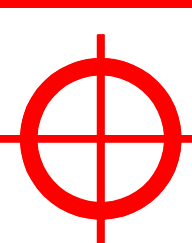


## Survey Station Information

SIA No.	Easting	Northing	Level	Type
S1	474991.874	226072.096	89.539	NALL
S1A	475071.692	226083.295	87.639	NALL

## Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSNGR), using industry Standard Network RTK GPS equipment using the OS Active Network (OS Net). A true OSGB26 coordinate has been established on site using the OSTN15 (Transformation) and OSGB15 (grid) models. The survey detail has been corrected to this point and a further one (or more) OSGB26 points established to produce a true OS bearing for angle orientation.



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SCALE 1 =

East Claydon BESS Site  
Buckingham MK18 3ND

# TOPOGRAPHICAL SURVEY

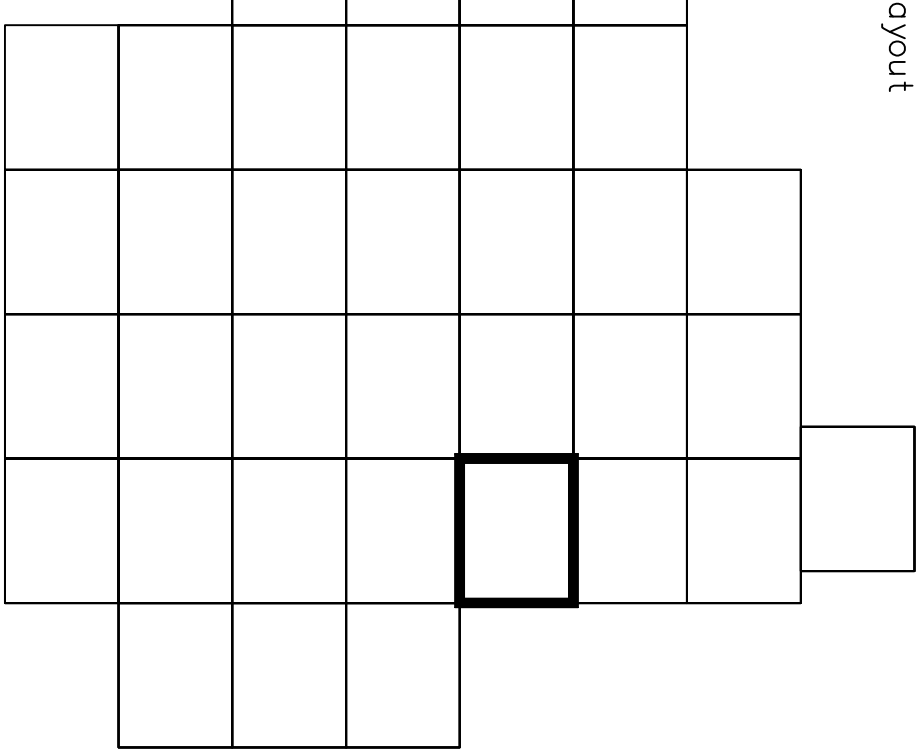
JOB No	DRAWING NU MBER
RT/224/0025	RT/224/0025/P/0025

A0 Sheet - 1,189mm X 841mm

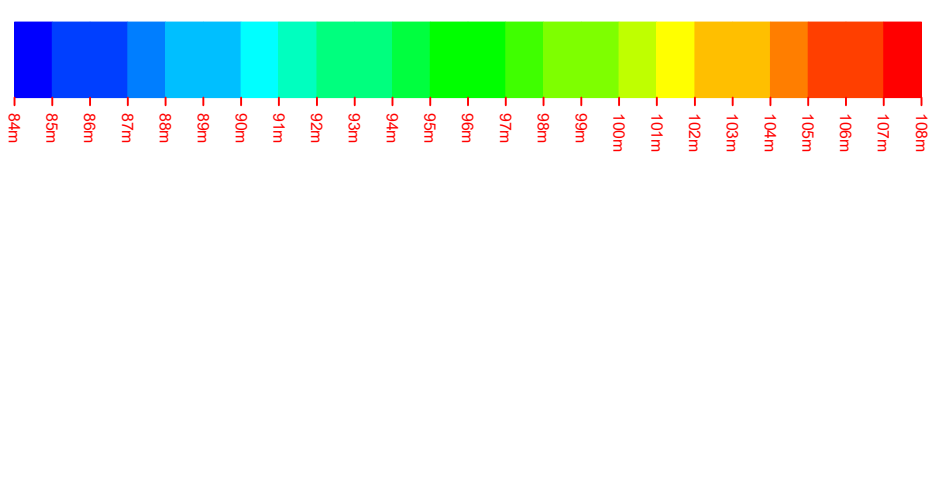


[illegible]

Sheet Layout



Contours Color Map:



Survey Station Information			
STA No.	Easting	Northing	Level
SI	474499.874	226072.096	89.539
SIA	475071.682	226083.295	87.659
			NAL

## Notes

All heights are in metres unless otherwise specified. All levels are in metres unless otherwise specified. The survey detail has been corrected to this point and a further one (or more) OSGB36 points established to produce a true OS bearing for angle orientation.

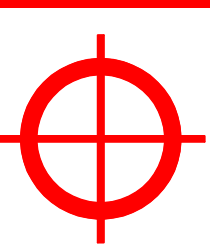
Scale factor 1.0 has been applied therefore the survey coordinates are shown on a pseudo OS grid.

All levels are in metres unless otherwise specified

All heights are in millimetres unless otherwise specified

Rev	Stat	QA	Description	Date
0	Prelim	-	Preliminary - Not Complete	23/04/20
1	-	PM	Centours Added	24/04/20
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-

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SCALE	1 =
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East Claydon BESS Site  
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## TOPOGRAPHICAL SURVEY

JOB No	DRAWING NU MBER
RT/224/0025	RT/224/0025/P/0026

A0 Sheet - 1, 189mm X 841mm

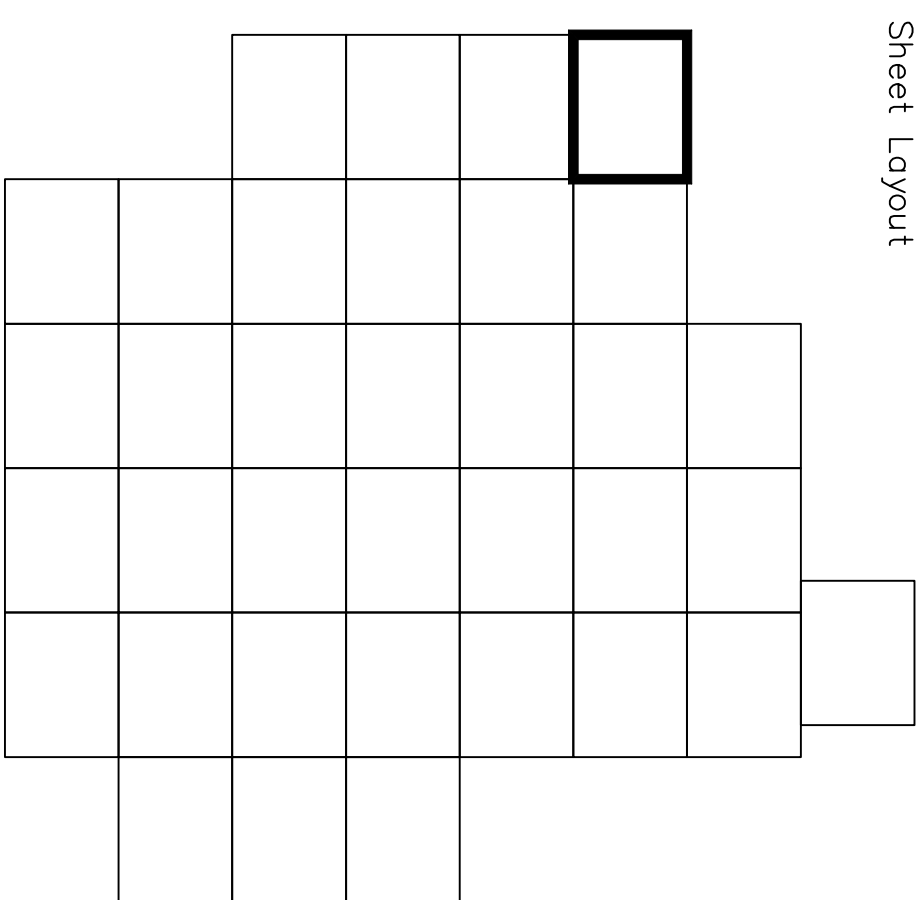


OS NORTH

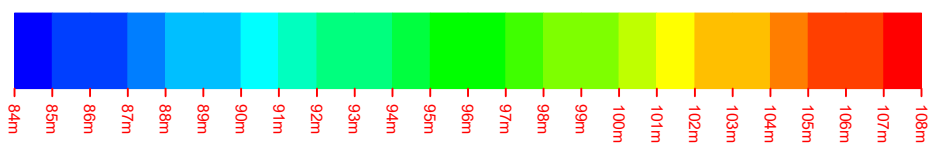
## Topographical Abbreviations

[illegible]

Sheet Layout#



Contours Color Map:



## Survey Station Information

STA No.	Easting	Northing	Level	Type
S1	474891.874	226072.086	89.539	NALL
S1A	475071.682	226083.285	87.659	NALL

## Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSNGR), using industry Standard Network RTK GPS equipment using the OS Active Network (OS Net). A true OSGB26 coordinate has been established on site using the OSTN15 (Transformation) and OSGB15 (grid) models. The survey detail has been corrected to this point and a further one (or more) OSGB26 points established to produce a true OS bearing for angle orientation.

Rev	Syst	QA	Description	Date
5	-	-	-	-
4	-	-	-	-
3	-	-	-	-
2	-	-	-	-
1	-	PM	Contours Added	24/04/2024
0	PM	First Complete Issue		22/04/2024
	Prelim	Preliminary - Not Complete		

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0118 930 3314

  
The Surveyor  
The Surveyor  
The Surveyor

  
CIRCS  
CIRCS  
CIRCS

SCALE	1:200
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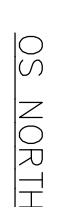
East Croydon BSS site  
Buckingham MK18 3ND

# TOPOGRAPHICAL SURVEY

JOB No	DRAWING NU MBER
RT/224/0025	RT/224/0025/P/0027

A0 Sheet - 1,189mm X 841mm

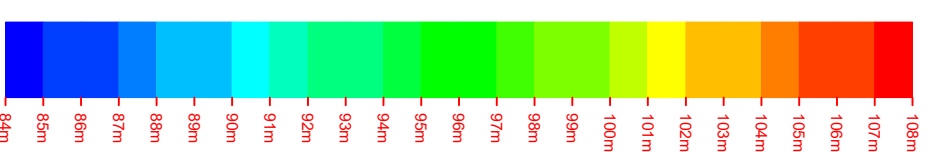
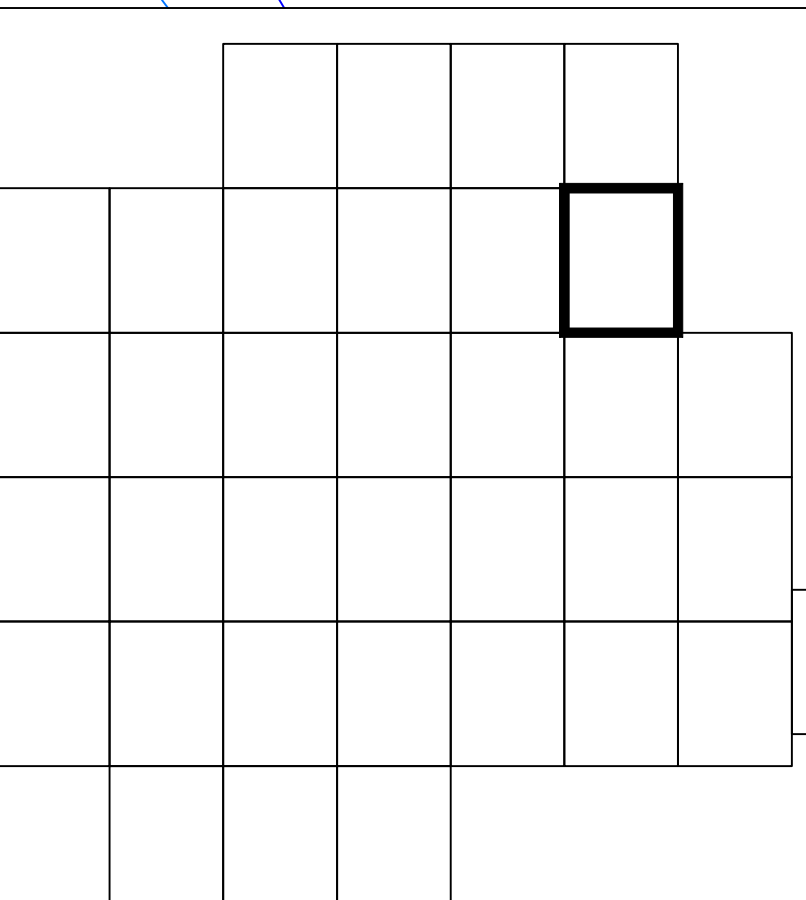




BCL	Ballard	N
BT	British Telecom	N
	Cover	N

[illegible]

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<u>STA No.</u>	<u>Easting</u>	<u>Northing</u>
----------------	----------------	-----------------

SI	474991.874	226072.086	89.539	N
SIA	475071.692	226083.295	87.659	N

The survey  
JOSCAR.36

The surveys have been ordered to Ordnance Survey (OS) National Grid (OSNB28) using industry Standard Network RPK GPS equipment fitted to the OS Active Network (OS Net).

A true OSNB28 coordinate has been established on site using the OSNB15 (Transformation) & OSNB15 (Grid) models.

The survey detail has been converted to this point and a further one (or more) OSNB28 points established to produce a true OS bearing for angle orientation.

Scale factor 1.0 has been applied therefore the survey coordinates are almost on a pseudo OS grid.

All heights are in metres unless otherwise specified


All lengths are in millimetres unless otherwise specified


5	-	-	-
4	-	-	-
3	-	-	-
2	-	-	-
1	PM	Contours Added	24/04/2024
0	PM	Prelim Complete Issue	23/04/2024
	-	Preliminary Not Complete	-
Rev	Systr	QA Check	Description
Date			


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JOB No	DRAWING NU MBER
RT/224/0025	RT/224/0025/P/0028
A0 Sheet - 1,189mm X 841mm	

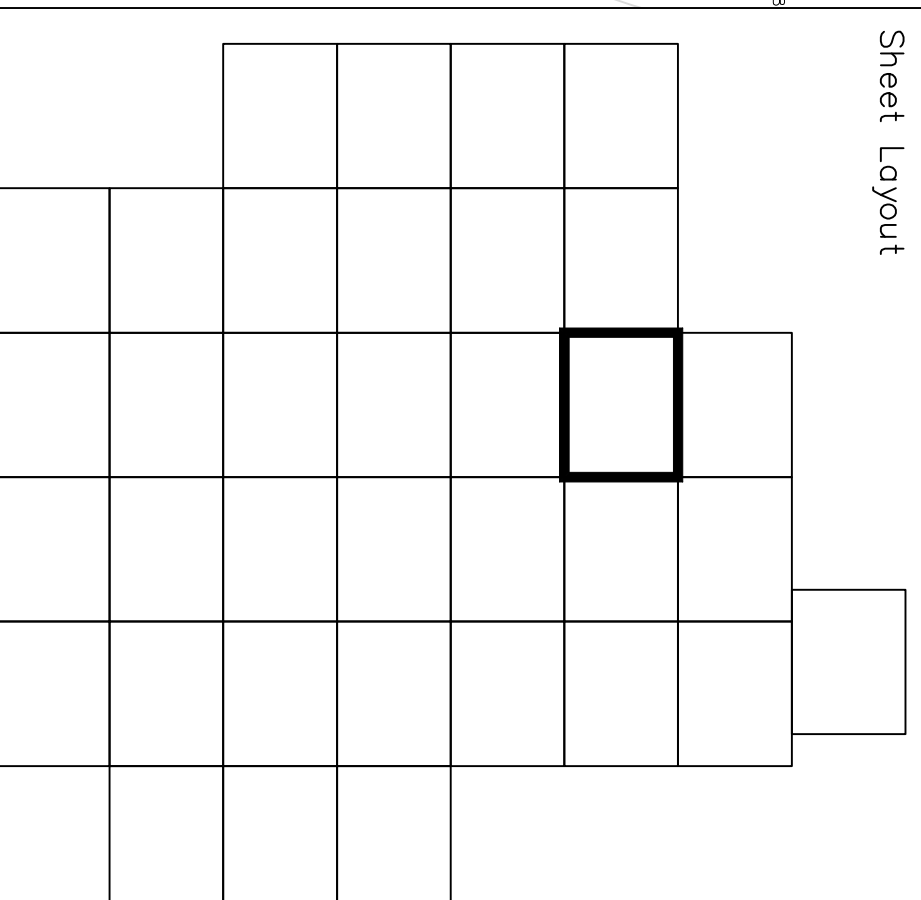




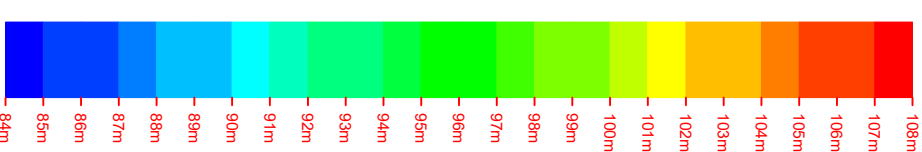
## Topographical Abbreviations

[illegible]

## Sheet Layout



Contours Color Map:



## Survey Station Information

STA No.	Easting	Northing	Level	Type
SI	474991.874	226072.096	89.539	NALL
SIA	475071.692	226083.295	87.659	NALL

## Notes

The surveys have been oriented to Ordnance Survey (OS) National Grid (OSNB83) using industry Standard Network RTK GPS equipment fitted to the OS Active Network (OS Net). A true OSNB83 coordinate has been established on site using the OSN15 (Transformation) and OSGB15 (Geoid) models. The survey detail has been converted to this point and a further one (or more) OSNB83 points established to produce a true OS bearing for angle orientation.



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SCALE

1:200

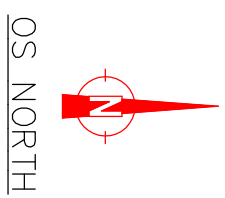
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# TOPOGRAPHICAL SURVEY

JOB No	DRAWING NU MBER
RT /224 /0025	RT /224 /0025 /P /0029

A0 Sheet - 1,189mm X 841mm

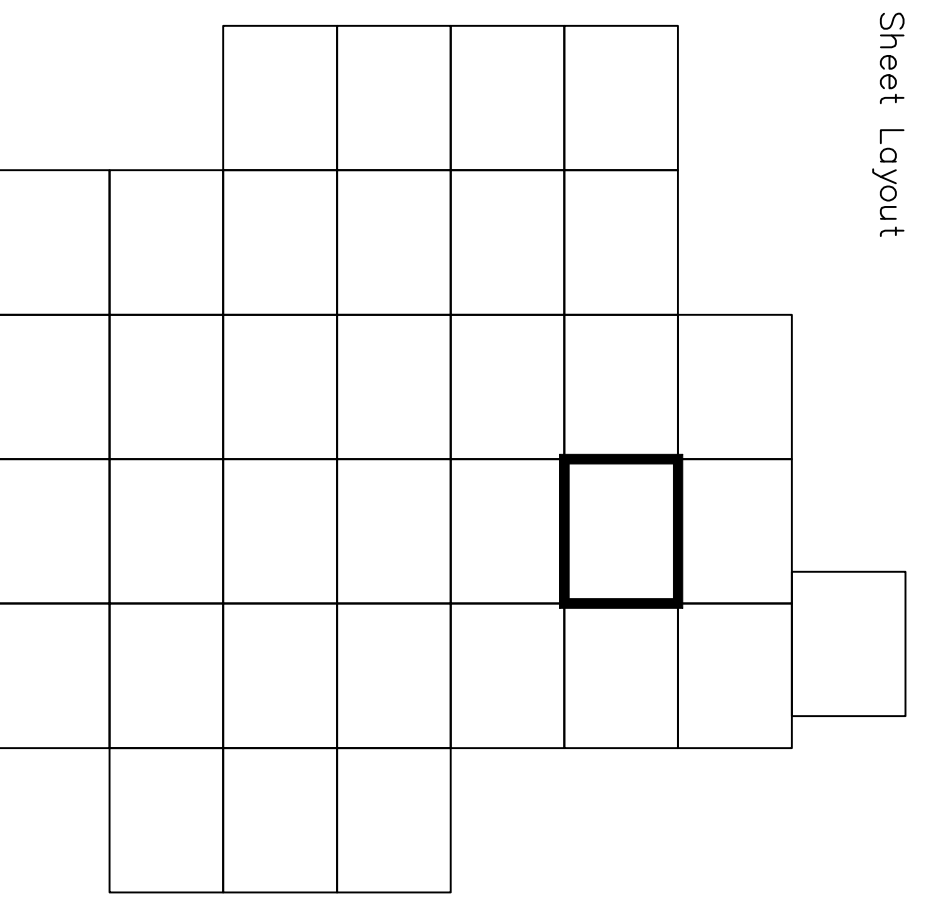




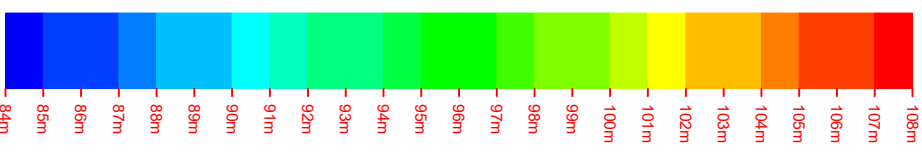
Topographical Abbreviations

BM	British Telecom Cover	WH	Water Hole
BT	British Telecom	WM	Water Main
BR	Brickwork	WV	Water Valve
BU	Buried	WY	Water Yoke
CB	Cable Box	WZ	Water Zou
CD	Cable Duct	WZ	Water Zou
CE	Cable End	WZ	Water Zou
CF	Cable Foot	WZ	Water Zou
CG	Cable Ground	WZ	Water Zou
CH	Cable Head	WZ	Water Zou
CI	Cable Inlet	WZ	Water Zou
CJ	Cable Junction	WZ	Water Zou
CK	Cable Key	WZ	Water Zou
CL	Cable Loop	WZ	Water Zou
CM	Cable Man	WZ	Water Zou
CN	Cable Net	WZ	Water Zou
CO	Cable Out	WZ	Water Zou
CP	Cable Port	WZ	Water Zou
CQ	Cable Quarter	WZ	Water Zou
CR	Cable Road	WZ	Water Zou
CS	Cable Sign	WZ	Water Zou
CT	Cable T	WZ	Water Zou
CU	Cable Unit	WZ	Water Zou
CV	Cable Valve	WZ	Water Zou
CW	Cable Wire	WZ	Water Zou
CX	Cable X	WZ	Water Zou
CY	Cable Y	WZ	Water Zou
CZ	Cable Z	WZ	Water Zou
DA	Dam	WZ	Water Zou
DB	Dam Bank	WZ	Water Zou
DC	Dam Channel	WZ	Water Zou
DD	Dam Ditch	WZ	Water Zou
DE	Dam Embankment	WZ	Water Zou
DF	Dam Foot	WZ	Water Zou
DG	Dam Gate	WZ	Water Zou
DH	Dam Head	WZ	Water Zou
DI	Dam Inlet	WZ	Water Zou
DJ	Dam Junction	WZ	Water Zou
DK	Dam Key	WZ	Water Zou
DL	Dam Loop	WZ	Water Zou
DM	Dam Man	WZ	Water Zou
DN	Dam Net	WZ	Water Zou
DO	Dam Out	WZ	Water Zou
DP	Dam Port	WZ	Water Zou
DQ	Dam Quarter	WZ	Water Zou
DR	Dam Road	WZ	Water Zou
DS	Dam Sign	WZ	Water Zou
DT	Dam T	WZ	Water Zou
DU	Dam Unit	WZ	Water Zou
DV	Dam Valve	WZ	Water Zou
DW	Dam Wire	WZ	Water Zou
DX	Dam X	WZ	Water Zou
DY	Dam Y	WZ	Water Zou
DZ	Dam Z	WZ	Water Zou

Sheet Layout



Contours Color Map:



Survey Station Information	Level	Use
STATION	87.15	Level
STATION	87.15	Level
STATION	87.15	Level
STATION	87.15	Level

Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSGB36) using industry Standard Network RTK GPS equipment utilizing the OS Active Network (OS Net). The survey has been conducted on the OSGB36 (transformation) & OSGB36 (grid) model. The survey detail has been corrected to this point and a further one (or more) OSGB36 points established to produce a true OS bearing for angle. Scale factor 1.0 has been applied therefore the survey coordinates are shown on a pseudo OS grid. Abbreviations specified. All heights are in millimetres unless otherwise specified.

5	-	-	-	-
3	-	-	-	-
2	-	-	-	-
1	-	-	-	-
0	-	-	-	-

Rev	Rev	Description	Date
1	0	Final	20/04/2024
2	1	Final	20/04/2024
3	2	Final	20/04/2024



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RT/24/0025	RT/24/0025/P/0030	

TOPOGRAPHICAL SURVEY

JOB No	DRAWING NUMBER
RT/24/0025	RT/24/0025/P/0030





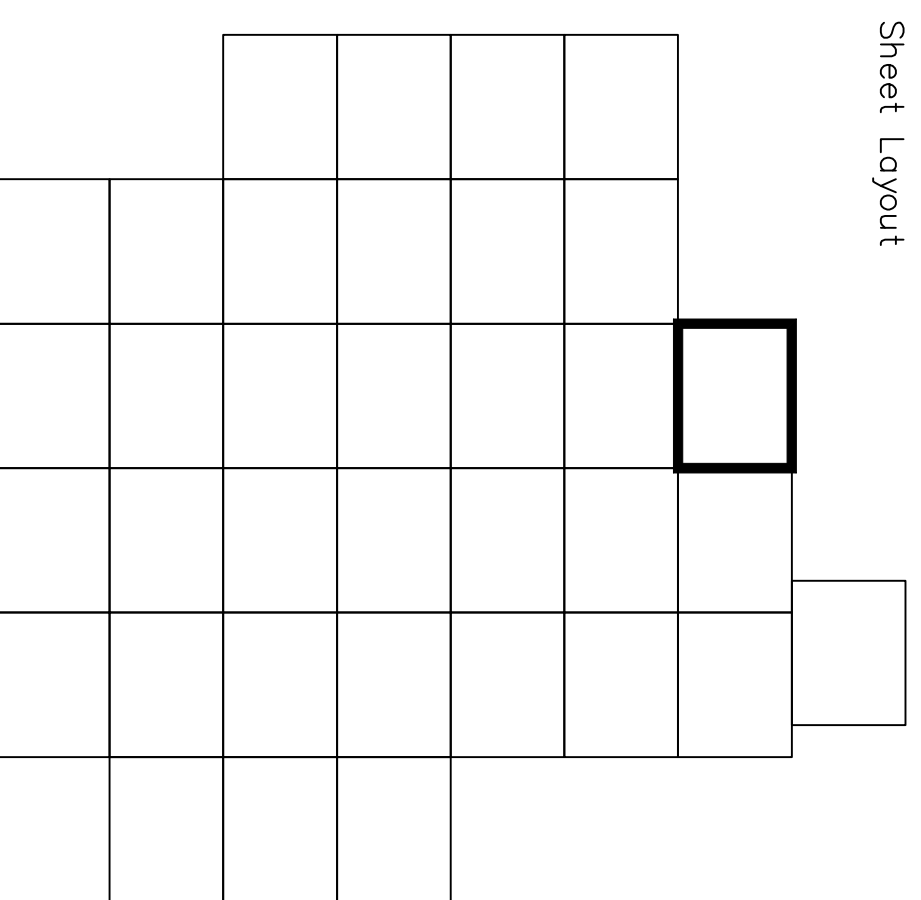


OS NORTH

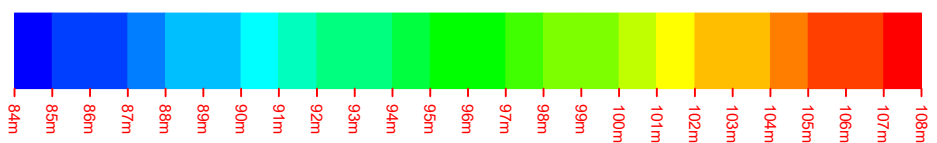
## Topographical Abbreviations

[illegible]

Sheet Layout



Contours Color Map:



## Survey Station Information

STA No.	Easting	Northing	Level	Type
S1	474991.874	226072.086	89.539	NAIL
S1A	475071.692	226083.295	97.659	NAIL

## Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSNGR), using industry Standard Network RTK GPS equipment using the OS Active Network (OS Net). A true OSGB26 coordinate has been established on site using the OSTN15 (Transformation) and OSGB15 (grid) models. The survey detail has been corrected to this point and a further one (or more) OSGB26 points established to produce a true OS bearing for angle orientation.

Rev	Syr	OA	Description	Date
5	-	-	-	-
4	-	-	-	-
3	-	-	-	-
2	-	-	-	-
1	-	PM	Contours Added	24/04/2024
0	-	PM	First Complete Issue	23/04/2024
	<del>Prelim</del>	-	Preliminary - Not Complete	

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SURVEYED	WH/MS	Lichfields
DRAWN	WH/MS	
SCALE	1:200	

# TOPOGRAPHICAL SURVEY

JOB No	DRAWING NU MBER
RT/224/0025	RT/224/0025/P/0032

A0 Sheet - 1,189mm X 841mm

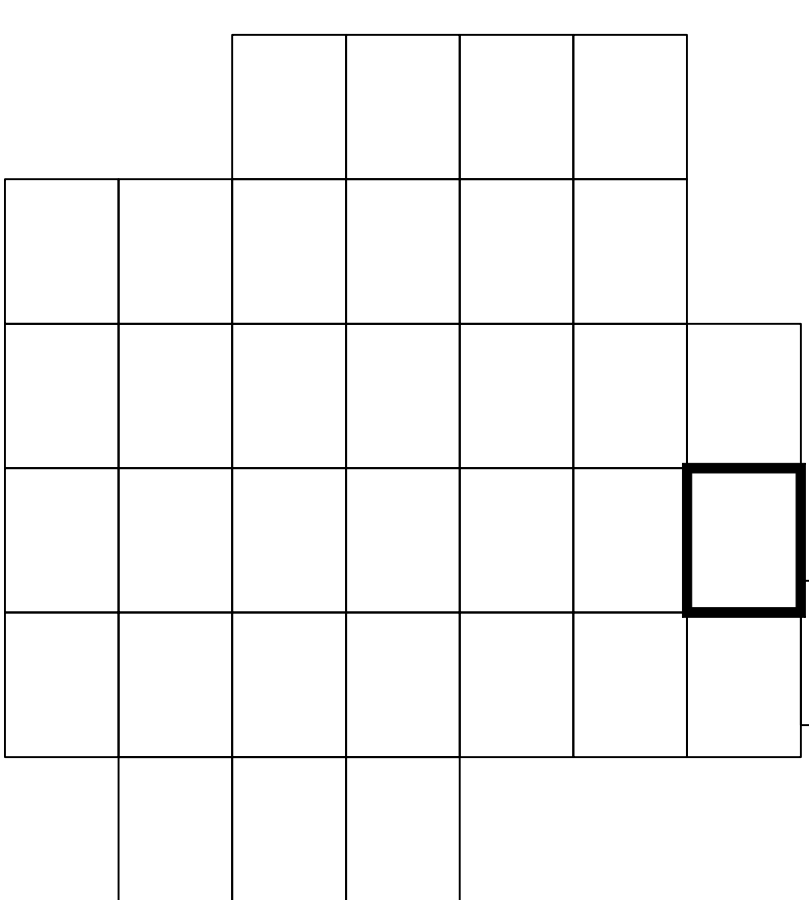




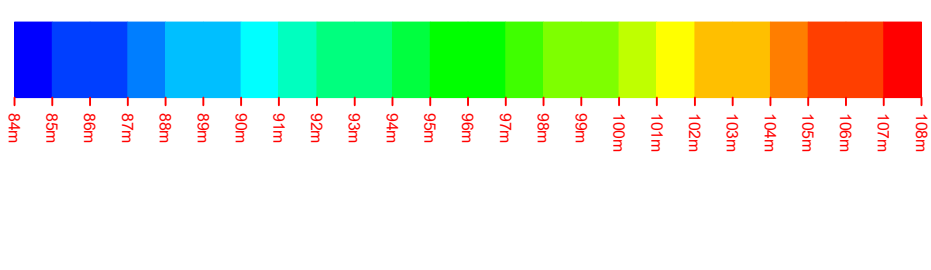
## Topographical Abbreviations

[illegible]

## Sheet Layout



Contours Color Map:



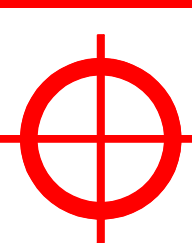
## Survey station information

SIA No.	Logging	Notching	Level	Type
S1	474991.874	226072.086	89.539	NAIL
S1A	475071.682	226083.285	97.659	NAIL

## Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSGB36) using industry Standard Network RTK GPS equipment using the OS Active Network (OS Net). A true OSGB36 coordinate has been established on site using the OSN15 (Transformation) and OSGB15 (geoid) models. The survey detail has been corrected to this point and a further one (or more) OSGB36 points established to produce a true OS bearing for angle orientation. Scale factor 1.0 has been applied therefore the survey coordinates are shown on a pseudo OS grid. All levels are in metres unless otherwise specified. All heights are in millimetres unless otherwise specified.

Rev	Syl	QA check	Description	Date
5	-	-	-	-
4	-	-	-	-
3	-	-	-	-
2	-	-	-	-
1	-	PM	Contours Added	24/04/2022
0	-	PM	Final Complete Issue	23/04/2022
			Preliminary - Not Complete	-




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SCALE

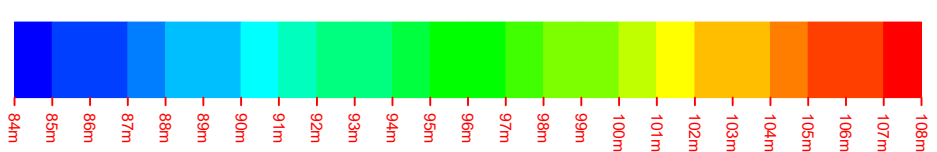
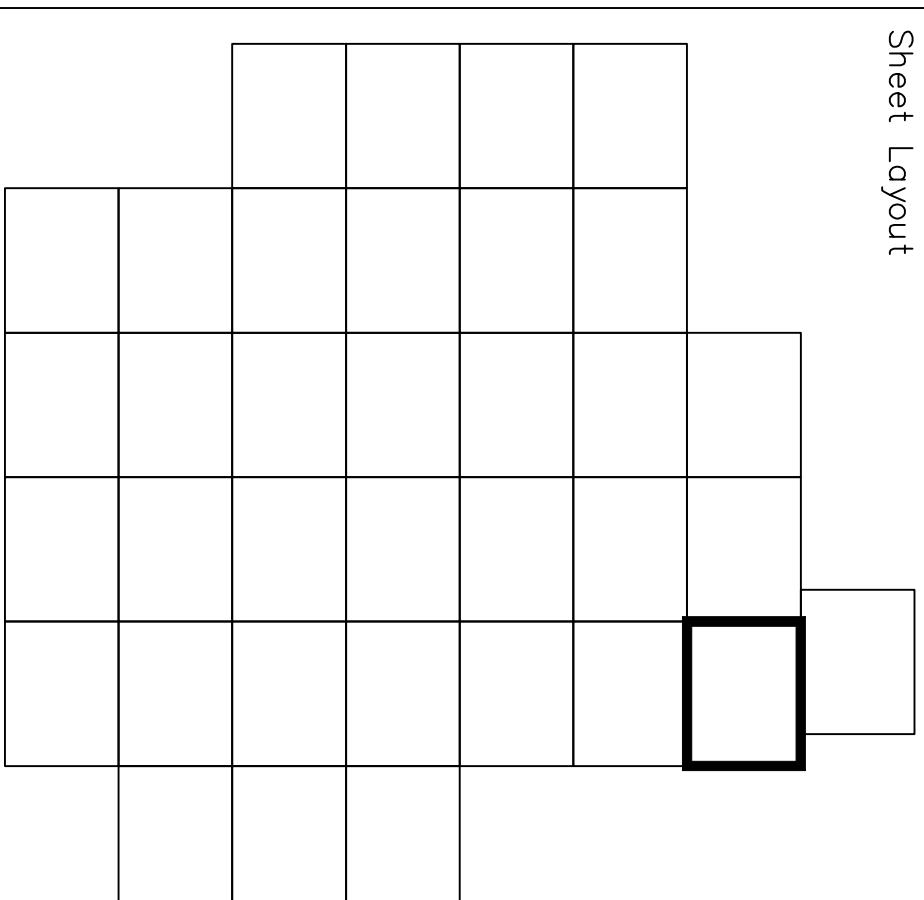
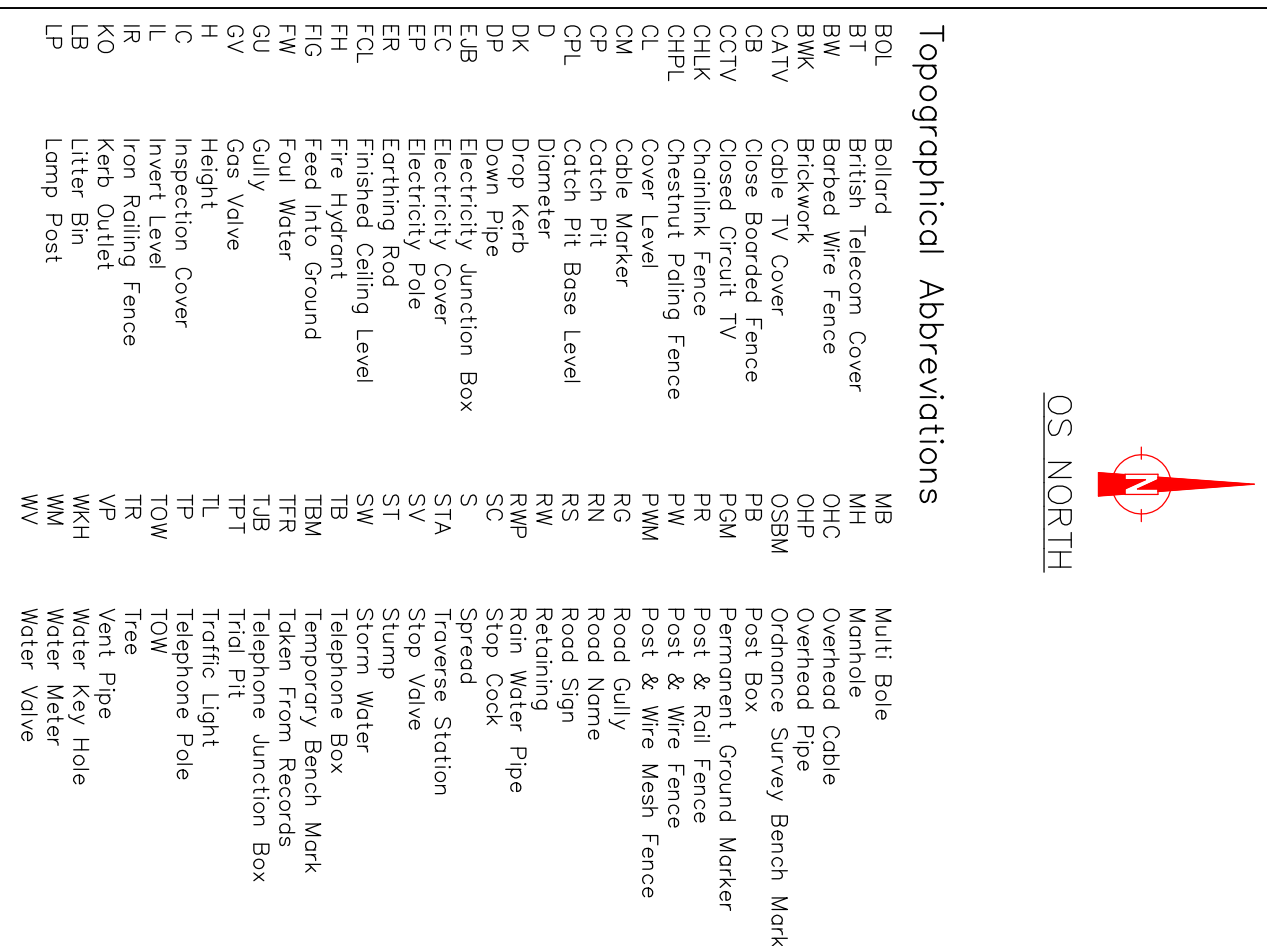
East Claydon BESS Site  
Buckingham MK18 3ND

# TOPOGRAPHICAL SURVEY

JOB No	DRAWING NU MBER
RT/224/0025	RT/224/0025/P/0033

A0 Sheet - 1,189mm X 841mm



[illegible]

## Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSNGRD) using industry Standard Network RTK GPS equipment utilizing the OS active network (OS Net).

A true OS2536 coordinate has been established on site using the OS215 (Transdynamica) & OS2818 (geod) models.

The survey datum was established to this point and a further one (or more) OS2536 points established to produce a true OS bearing for comparison.

Scale factor is 1.0, no grid, therefore the survey coordinates are shown on a pseudo OS grid.

All values are in metres unless otherwise specified.


All heights are in millimetres unless otherwise specified.


5	-	-	-	-
4	-	-	-	-
3	-	-	-	-
2	-	-	-	-
1	-	PM	Centures Added	24/04/2024
0	-	PM	First Complete Issue	23/04/2024
	-	Prelim	First Complete Issue	-
	-	Prelim	Not Complete	-
Rev	Styr	QA	Description	Date
Check				

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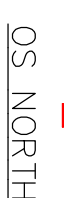
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DRAWN BY	WJ/MMS	
SCALE	1:200	
East Claydon BESS Site Buckingham MK18 3ND		
TOPOGRAPHICAL SURVEY		
JOB No	DRAWING NU MBER	
RT/224/0025	RT/224/0025/P/0034	

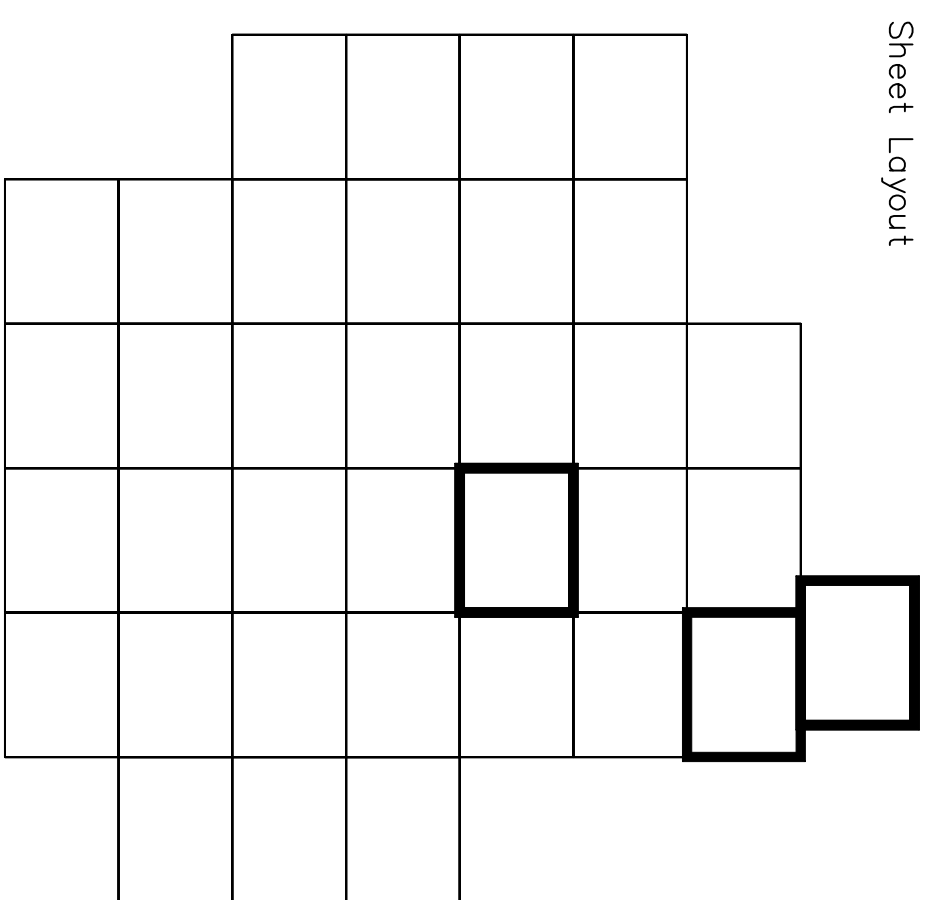




## Topographical Abbreviations

[illegible]

## Sheet Layout



Contours Color Map:

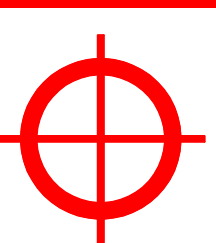
### Survey Station Information

STA No.	Easting	Northing	Level	Type
S1	474991.874	226072.086	89.539	NAIL
S1A	475071.692	226083.295	97.659	NAIL

## Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSNGR), using industry Standard Network RTK GPS equipment using the OS Active Network (OS Net). A true OSGB26 coordinate has been established on site using the OSTN15 (Transformation) and OSGB15 (grid) models. The survey detail has been corrected to this point and a further one (or more) OSGB26 points established to produce a true OS bearing for angle orientation.

Rev	Syr	OA	Description	Date
5	-	-	-	-
4	-	-	-	-
3	-	-	-	-
2	-	-	-	-
1	-	PM	Contours Added	24/04/2024
0	PM	First Complete Issue	23/04/2024	-
	Prelim	-	Preliminary - Not Complete	



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SCALE

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# TOPOGRAPHICAL SURVEY

JOB No	DRAWING NU MBER
RT/224/0025	RT/224/0025/P/0035

A0 Sheet - 1,189mm X 841mm







×92.22

×92.49

×92.11

×92.47

×92.70

×92.70

×92.61

×92.91

×92.85

3.22

×93.14

×93.40

474660.000E

474680.000E

474700.000E

474720.000E

225900.000N

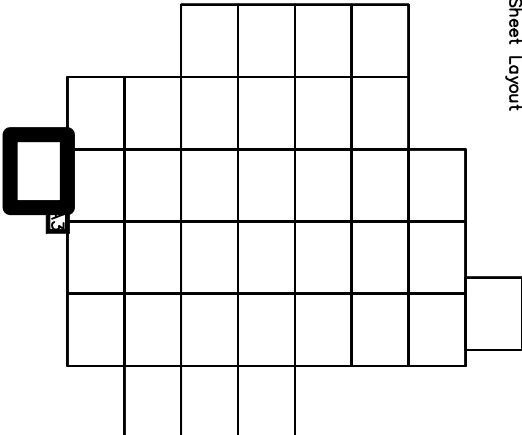
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Building Abbreviations

BL	Basement Level	RWP	Rain Water Pipe
BSL	Beam Soffit Level	SWP	Soil Water Pipe
BSU	Beam Soffit Under	SVP	Soil Vent Pipe
DP	Down Pipe	VP	Vent Pipe
DPC	Damp Proof Course	C	Cill Height from FFL
FFL	Finished Floor Level	W	Window Height from Cill
FTL	Finished Ceiling Level	H	Door Height
2100	Floor to Ceiling Height	↙	Direction of Floor Joist Span

Sheet Layout



Survey Station Information

STA. No.	Easting	Northing	Level	Type
SI	474891.874	226072.096	89.539	NAIL
STA	475071.682	226083.295	87.659	NAIL
ST2	474505.953	225971.643	95.659	NAIL
ST3	474546.503	225956.148	94.665	PEG

Notes

The survey has been oriented to Ordnance Survey (OS) National Grid (OSGB36) using industry Standard Network RTK GPS equipment utilising the OS Active Network (OS Net).  
A true OSGB36 coordinate has been established on site using the OSTN15 (transformation) & OSDB15 (geoid) models.  
The survey detail has been correlated to this point and a further one (or more) OSGB36 points established to produce a true OS bearing for angle orientation.  
Scale factor 1.0 has been applied therefore the survey coordinates are shown on a pseudo OS grid.  
All levels are in metres unless otherwise specified  
All heights are in millimetres unless otherwise specified

5	-	-	-	-
4	-	-	-	-
3	-	-	-	-
2	-	-	-	-
1	-	-	-	-
0	PM	First Complete Issue	-	-
Prelim	-	Preliminary - Not Complete	-	-
Rev	QA	Description	Date	
Check				

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DRAWN	AS	

SCALE 1:200

East Claydon Road

TOPOGRAPHICAL SURVEY

JOB No	DRAWING NUMBER
--------	----------------

RT1224/0035 RT1224/0035/P10037

A3 Sheet - 420mm x 297mm



## **Appendix C**

Agricultural Land Classification Survey and Plans Showing the Extent of the IDB's District  
Hatched in Green



**EAST CLAYDON  
GREENER GRID PARK**

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**AGRICULTURAL LAND  
CLASSIFICATION**

**April 2025**







## **EAST CLAYDON GREENER GRID PARK**

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### **AGRICULTURAL LAND CLASSIFICATION**

**April 2025**

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**Authorised By EGC 04/25**

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Consultants - **Ellie Clark** BSc(Hons), **Amy Curtis** BSc(Hons)*



## CONTENTS

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- 1 Introduction
- 2 Agricultural Land Classification
- 3 ALC Survey

### **Appendix**

- A Amet Property ALC



## 1 INTRODUCTION

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- 1.1 This report provides the Agricultural Land Classification for the East Claydon Greener Grid Park proposal.
- 1.2 The Site was surveyed as part of a larger survey area.

## 2 AGRICULTURAL LAND CLASSIFICATION

---

- 2.1 Agricultural land is measured under a system of Agricultural Land Classification (ALC). This grades land based on the long-term physical limitations of land for agricultural use, including climate (temperature, rainfall, aspect, exposure and frost risk), site (gradient, micro-relief and flood risk) and soil (texture, structure, depth and stoniness) criteria, and the interactions between these factors determining soil wetness, droughtiness and utility.
- 2.2 Land is divided into five grades, 1 to 5. Grade 3 is divided into two subgrades. Land falling into ALC Grades 1, 2 and Subgrade 3a is the “**best and most versatile**” (BMV) (as defined in the National Planning Policy Framework (2024), Annex 2). Natural England estimate that 42% of agricultural land in England is of BMV quality (see Natural England’s Technical Information Note TIN049).

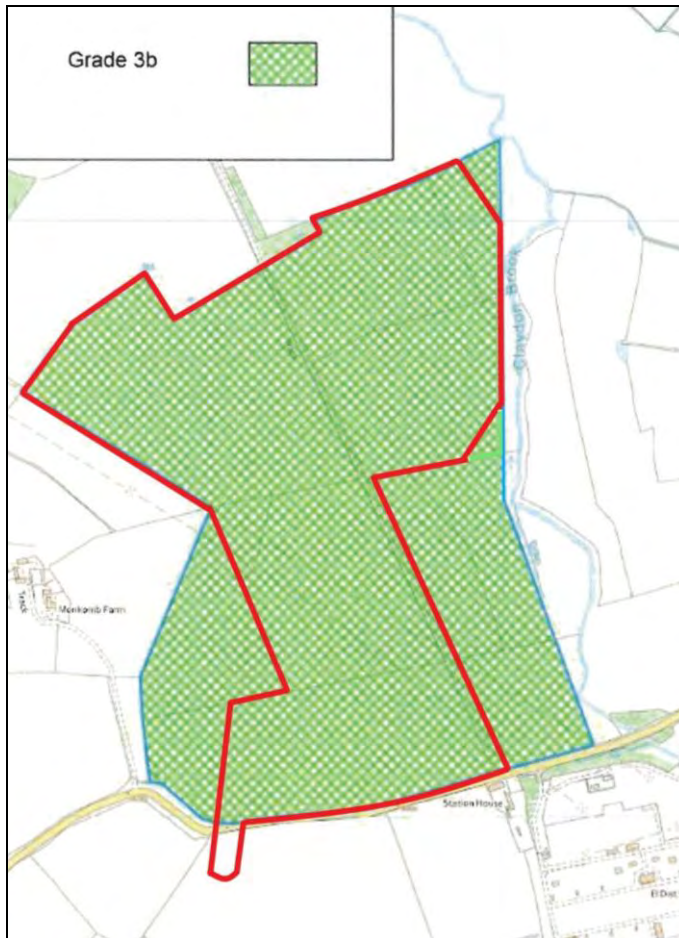
### 3 ALC SURVEY

---

3.1 Amet Property Ltd have surveyed the site and a wider area. The ALC is set out in **Appendix KCC1**.

3.2 The site is shown outlined in red below. A small area, measuring 0.8 ha, is road and land not surveyed on the south side of the road.

*Insert A: The ALC Results*





3.3 The results are as follows.

*Table 1: ALC Results*

<b>Grade</b>	<b>Description</b>	<b>Area (ha)</b>	<b>Proportion (%)</b>
3b	Moderate	44.4	98
NS	Not surveyed	0.8	2
<b>T</b>	<b>Total</b>	<b>45.2</b>	<b>100</b>

3.4 None of the site is Best and Most Versatile quality.

**APPENDIX A**  
**Amet Property ALC**





# AGRICULTURAL LAND CLASSIFICATION EAST CLAYDON

CLIENT: KERNON COUNTRYSIDE CONSULTANTS  
PROJECT: EAST CLAYDON  
DATE: 16<sup>TH</sup> JULY 2024 – ISSUE 1  
ISSUED BY: JAMES FULTON MRICS FAAV

# CONTENTS

1. EXECUTIVE SUMMARY
2. INTRODUCTION
3. PUBLISHED INFORMATION
4. CLIMATE
5. STONINESS
6. GRADIENT
7. SOILS

## INTERACTIVE FACTORS

8. WETNESS
9. DROUGHTINESS
10. AGRICULTURAL LAND CLASSIFICATION

APPENDIX 1 – DETAILS OF THE AUTHORS EXPERIENCE

APPENDIX 2 – PLAN OF SITE WITH SAMPLING POINTS

APPENDIX 3 – AGRO-CLIMATIC DATA

APPENDIX 4 – SURVEY DATA

APPENDIX 5 – DESCRIPTION OF AGRICULTURAL LAND CLASSIFICATION GRADES

APPENDIX 6 – MAP OF LAND GRADING



## 1. EXECUTIVE SUMMARY

- 1.1 This report assesses the Agricultural Land Classification (ALC) grading of 63.4Ha, of agricultural land at East Claydon.
- 1.2 The limiting factor found to be soil wetness, a combination of the climatic regime, soil water regime and texture of the top 25cm of the soil.
- 1.3 The land is graded as follows:

Grade 3b:                  63.4 Ha

## 2. INTRODUCTION

- 2.1 Amet Property Ltd have been instructed by Kernon Countryside Consultant to produce an Agricultural Land Classification (ALC) report on a 63.4-hectare site on land at East Claydon.
- 2.2 The report's author is James Fulton BSc (Hons) MRICS FAAV who has worked as a chartered surveyor, agricultural valuer, and agricultural consultant since 2004, has a degree in agriculture which included modules on soils and over 10 years' experience in advising farmers on soil structure and cultivation methods and in producing agricultural land classification reports. Additional information on authors experience is found at *appendix 1*.
- 2.3 The report is based on a site visit conducted by James Fulton and 2 assistant surveyors on the 24<sup>th</sup> of May 2024 during which the conditions were sunny with soils moist at all horizons.
- 2.4 During the inspection 2 trial pits were dug to a depth of 120cm. In addition to the trial pits an auger was used to take approximately one sample per hectare on the proposed development site to a depth of 120cm with smaller trial pits at some of these locations to confirm soil structure and colour where it was not clear from the auger samples. A plan of auger points and trial pit locations can be found at *appendix 2*. The trial pit locations were selected as they were representative of the soils found on site. Where subsoils were inspected with a spade, descriptions of structure have been recorded based on the soil survey field handbook<sup>1</sup>; where an auger has been used the structure is described as good, moderate or poor based on figure 9,10 and 11 in the MAFF<sup>2</sup> guidance. Colours are described using Munsell Colours<sup>3</sup>.
- 2.5 The surveyed area extends to 63.4Ha of arable and grassland. The land is northeast of East Claydon, north of the Substation and bisected by the old railway.
- 2.6 Further information has been obtained from the MAGIC website, the Soil Survey of England and Wales, the British Geological Survey, the Meteorological Office and 1:250,000 series Agricultural Land Classification maps.
- 2.7 The collected information has been judged against the Ministry of Agriculture Fisheries and Food Agricultural Land Classification of England and Wales revised guidelines and criteria for grading the quality of agricultural land.

---

<sup>1</sup> Hodgson, JM (1997) Soil Survey Field Handbook

<sup>2</sup> MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications

<sup>3</sup> Munsell Color (2009) Munsell Soil Color Charts



- 2.8 The principal factors influencing agricultural production are climate, site and soil and the interaction between them MAFF (1988) & Natural England (2012)<sup>4</sup>.
- 2.9 The report is prepared and formatted considering the latest BSSS guidance<sup>5</sup>.
3. PUBLISHED INFORMATION
- 3.1 The British Geological Survey 1:50,000 scale map shows the bedrock geology to be largely Stewartby Member – mudstone. The eastern boundary has Stewartby Member – mudstone bedrock geology and superficial deposits of Alluvium – clay, silt, sand and gravel. There are two patches, one at the centre and one in the north of the site with bedrock geology Stewartby Member – mudstone and superficial deposits of River Terrace deposits – sand and gravel. The southwest corner of the site has the bedrock geology of Weymouth Member – mudstone.
- 3.2 The soils on the site are identified as being largely 712b DENCHWORTH Association, slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils. Apart from the eastern boarder which are identified as 813b FLADBURY 1 Association, stoneless clayey soils, in places calcareous variably affected by groundwater.
- 3.3 The 1:250,000 series Agricultural Land Classification maps show the land to be Grade 3 – good to moderate to the west and Grade 4 – poor to the east. These plans are of strictly limited value, using an out-of-date methodology at a very small scale (low detail) level of survey. Further information on the limits of their use can be found in TIN049.

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<sup>4</sup> MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications  
Natural England (2012) - *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land*, Second Edition

<sup>5</sup> BSSS (2022) Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales

#### 4. CLIMATE

- 4.1 Climate has a major, and in places overriding, influence on land quality affecting both the range of potential agricultural uses and the cost and level of production.
- 4.2 There is published agro-climatic data for England and Wales provided by the Meteorological Office, such data for the subject site is listed in the table below.

Agro-Climatic Data – Full details can be found at *appendix 3*

Grid Reference	474681,226548
Altitude (ALT)	90
Average Annual Rainfall (AAR)	676
Accumulated Temperature - Jan to June (ATO)	1397
Duration of Field Capacity (FCD)	141
Moisture Deficit Wheat	105
Moisture Deficit Potatoes	96

- 4.3 The main parameters used in assessing the climatic limitation are average annual rainfall (AAR), as a measure of overall wetness; and accumulated temperature (ATO), as a measure of the relative warmth of a locality.
- 4.4 The AAR and ATO provide no climatic limitation to grade.
- 4.5 The site is shown to be in largely flood zone 1 – areas with a less than 1 in 1000 annual chance of flooding.



5. STONINESS

- 5.1 There are some stones on the site but usually quite small and not of sufficient size or quantity to limit land grade.

6. GRADIENT AND MICRORELIEF

- 6.1 The site is flat to gently sloping with no gradient or microrelief to limit land grade.

7. SOILS

- 7.1 The soils found on site largely follow the expectations set by the national soils map. Full information on the sample points along with trial pit descriptions and photographs and lab test results can be found at *appendix 4*.
- 7.2 The clay across the site is very consistently dark greyish brown clay which was recorded on site as either clay or heavy clay loam. The lightest feeling sample was sent to the lab (survey point 61) and the lab confirmed that the topsoil is all defined as clay varying from 35% to 53% clay.
- 7.3 The subsoils are all gleyed with a moderately structured upper subsoil and poorly structured lower subsoil which is recorded as slowly permeable. Gleying starts anywhere from the surface to 50cm and the slowly permeable layer between 30cm and 80cm resulting in varying wetness classes.

## INTERACTIVE FACTORS

### 8. WETNESS

- 8.1 An assessment of the wetness class of each sample point was made based on the flow chart at Figure 6 in the MAFF guidance. The wetness class and topsoil texture were then assessed against Table 6 of the MAFF guidance to determine the ALC grade according to wetness. The wetness assessment can be found at *appendix 4*.
- 8.2 Where there is a gleyed horizon starting between 40 and 70cm and a slowly permeable layer at deeper than 48cm or there is a gleyed horizon at less than 40cm and slowly permeable layer at deeper than 66cm the assessment gives wetness class II.
- 8.3 Where there is a gleyed horizon starting between 40 and 70cm and a slowly permeable layer at shallower than 48cm or there is a gleyed horizon at less than 40cm and slowly permeable layer at between 38cm and 66cm the assessment gives wetness class III.
- 8.4 Where there is a gleyed horizon starting at less than 40cm and slowly permeable layer at less than 38cm the assessment gives wetness class IV.
- 8.5 Table 6, 126-150FCB, wetness class II, III or IV and clay topsoil results in a grade 3b limitation.

## 9. DROUGHTINESS

- 9.1 Droughtiness limits are defined in terms of moisture balance for wheat and potatoes using the formula:

$$\text{MB (Wheat)} = \text{AP (Wheat)} - \text{MD (Wheat)}$$

and

$$\text{MB (Potatoes)} = \text{AP (Potatoes)} - \text{MD (Potatoes)}$$

Where:

MB = Moisture Balance

AP = Crop Adjusted available water capacity

MD = Moisture deficit

- 9.2 Moisture deficit for wheat and potatoes can be found in the agro-climatic data and are as follows:

$$\text{MD (Wheat)} = 105$$

$$\text{MD (Potatoes)} = 96$$

- 9.3 Crop adjusted available water is calculated by reference to the total available water and easily available water which is calculated by reference to soil texture and structural condition and the stone content.
- 9.4 The moisture balance was calculated for the trial pit locations and can be found at *appendix 4*. Droughtiness is not the most limiting factor.



## 10. AGRICULTURAL LAND CLASSIFICATION

- 10.1 The Agricultural Land Classification provides a framework for classifying land according to which its physical or chemical characteristics impose long-term limitations on agricultural use. The limitations can operate in one or more of four principle ways: they may affect the range of crops that can be grown, the level of yield, the consistency of yield and the cost of obtaining it.
- 10.2 The principle physical factors influencing agricultural production are climate, site and soil and the interactions between them which together form the basis for classifying land into one of 5 grades; grade 1 being of excellent quality and grade 5 being land of very poor quality. Grade 3 land, which constitutes approximately half of all agricultural land in the United Kingdom is divided into 2 subgrades – 3a and 3b. A full definition of all of the grades can be found at *appendix 5*.
- 10.3 This assessment sets out that the site is limited by both wetness and droughtiness.
- 10.4 The breakdown of land by classification is:
- Grade 3b: 63.4 Ha
- 10.5 A plan of the land grading can be found at *appendix 6*.

## **Appendix 1 – Details of the Authors Experience**

James Fulton

### **Professional Education and Qualifications**

BSc (Hons) Agriculture, University of Nottingham (2004)

Member of the Royal Institution of Chartered Surveyors (MRICS) (2008)

Fellow of the Central Association of Agricultural Valuers (FAAV) (2009)

### **Relevant Work Experience**

While working for a regional firm from 2004 until 2016 as part of my work I provided advice to farmers on soils, cultivation techniques and cropping and was involved in field trials which assessed cropping and cultivation techniques and how they impacted soil structure. At the same time I worked alongside an experienced surveyor who produced Agricultural Land Classification reports and I received training in field survey techniques and the ALC process to the point where I was able to produce ALC reports.

In 2016 I left my employer and formed Amet Property Ltd providing development consultancy and other rural practice surveying services. Of all of the services that we provide Agricultural Land Classification reports is the single largest area of work accounting for approximately 70% of all of my working time.

While I am not a member of the BSSS I meet the minimum competencies set out by the BSSS in Document 1 *Foundation skills in field soil investigation, description and interpretation* and Document 2 *Agricultural Land Classification (England and Wales)*

### **Professional Standards**

As a member of the Royal Institution of Chartered Surveyors and Fellow of the Central Association of Agricultural Valuers I am bound by their professional standards and am only able to carry out work where I am suitably qualified and experienced to do so. Due to the formal and practical training that I have received I am able to competently produce Agricultural Land Classification reports.

### **Assistant Surveyors**

All assistant surveyors have completed the BSSS working with soil course and have been trained to meet the requirements of BSSS Document 1 *Foundation skills in field soil investigation, description, and interpretation*.



**Promap**  
LANDMARK INFORMATION

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Plotted Scale - 1:10000. Paper Size - A4



### Appendix 3 – Climatic Data

Site Details: East Claydon

Grid reference (centre of site): 474681,226548

Altitude: Mean 89.67 AOD

Climatic data from surrounding locations:

Grid Reference	ALT	AAR	LR_AAR	ASR	ATO	ATS	MDW	MDP	FCD
4700 2250	93	644	0.4	335	1395	2357	105	96	136
4700 2300	86	670	0.3	340	1400	2362	104	95	142
4750 2250	93	682	0.4	335	1394	2358	105	96	142
4750 2300	93	676	0.3	335	1391	2355	105	96	141

Altitude Adjusted

GRID REFERENCE	AAR	ATO	FCD	MDW	MDP	PROXIMITY ADJUSTMENT
4700 2250	642.67	1398.80	135.81	105.43	96.58	7.42%
4700 2300	671.10	1395.82	142.16	103.55	94.40	5.33%
4750 2250	680.67	1397.80	141.81	105.43	96.58	72.23%
4750 2300	675.00	1394.80	140.86	105.41	96.55	15.01%