



# **Leuchars Station, Fife**

## **Ground Investigation Monitoring, Data Structure Report**

24 January 2020

Confidential



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# Executive summary

Mott MacDonald were commissioned by the Defence Infrastructure Organisation (DIO) to undertake an archaeological watching brief during Ground Investigation works in advance of proposed redevelopment within the Leuchars Station military base in Fife. The works involved excavation of a series of geotechnical trial pits focussed within the Garden and Designed Landscape (GDL) associated with nearby Earls Hall, a Category A Listed Building of mid-16<sup>th</sup> century date. DIO are proposing to re-purpose the former RAF Leuchars airbase (now known as Leuchars Station) to better suit the requirements of the army.

Discussions with the Fife Council Archaeology Officer confirmed the archaeological sensitivity of the site. There is strong evidence for prehistoric activity in the area around Leuchars Station, and in particular the Eden estuary where Mesolithic shell middens have been found. Leuchars has been an airbase and subsequently an army barracks since the early 20<sup>th</sup> century. As such, the site has survived much of the deep mechanised ploughing that has taken place through modern agricultural development. The absence of deep ploughing means that any archaeological deposits surviving within the limits of Leuchars Station may be well preserved and undamaged.

The trial pits excavated at Leuchars Station were limited in scope and failed to reveal any significant archaeological deposits or artefacts. A total of 14 trial pits were monitored across the Earls Hall GDL.

It is recommended that a programme of archaeological evaluation be completed in advance of any significant works within Leuchars Station where it can be proved that the locations of such works have previously been undisturbed by 20<sup>th</sup> and 21<sup>st</sup> century development. However, it is not anticipated further works will be required as part of this project.

A record of the watching brief has been deposited with the Online Access to the Index of Archaeological Investigations (OASIS) website hosted by the Archaeological Data Service (OASIS ID mottmacd2-387678).



# 1 Introduction

## 1.1 Overview

Mott MacDonald were commissioned by the Defence Infrastructure Organisation (DIO) to undertake an archaeological watching brief during Ground Investigation (GI) works associated with proposed redevelopment within the Leuchars Station military base in Fife. The works involved excavation of a series of geotechnical trial pits focussed within the Garden and Designed Landscape (GDL) associated with nearby Earlshall, a Category A Listed Building of mid-16<sup>th</sup> century date. DIO are proposing to re-purpose the former RAF Leuchars airbase (now known as Leuchars Station) to better suit the requirements of the army.

The watching brief was maintained by Ross Cameron over three days from Monday 21<sup>st</sup> to Wednesday 23<sup>rd</sup> October 2019. Weather conditions were predominantly bright and dry throughout, with occasional showers.

## 1.2 Site Location and Setting

### 1.2.1 Study Area

Leuchars Station is located on the east coast of Fife adjacent to the Eden Estuary (centred NO 46955 20724). The station is around 5 miles north of St Andrews and 7.5 miles south of Dundee and covers an area of 360 hectares. Neighbouring the north-western boundary of the Station is the village of Leuchars itself.

The majority of the ground area occupied by Leuchars Station comprises the operational element. This includes the airfield and associated buildings, including the main runway, taxiways and hardened aircraft shelters (HAS) on two distinct areas (Northern HAS site and Southern HAS site). There is also an explosive storage area and a missile servicing section on the south side of the site. The technical area is occupied by a range of buildings of various ages, types and functions including offices, hangars, stores, training facilities and servicing/maintenance workshops. There are around 360 buildings on the site.

The ground investigation works subject to archaeological monitoring are clustered in two clearly defined areas immediately north of Leuchars Station (Figure D.1 and Figure D.2). Both areas are located within the Earlshall GDL.

The northern of the two areas (Photo 1.1) is referred to as Area 1, or the Sports Pitch and currently comprises flat, open pasture (centred on NO 46031 21240). Area 1 is not currently exploited for agriculture and is a popular spot with dog walkers. Trial pits 4-9 were excavated in Area 1, with 1-3 excavated on the access route along Adam Close to the north west.



**Photo 1.1: View south east across Area A (Photograph 014)**

Trial pits 10-14 were excavated in Area 2 (centred on NO 46094 21019), to the south of Area 1 and geographically separated from this by a modern sports pitch, the houses on Playfair Drive and a line of mature policy trees associated with the Earlshall GDL (Photo 1.2). Area 2 is also referred to as Technical Area – East.



**Photo 1.2: Looking south into (Photograph 040)**

The topography of Area 2 is notably different from Area 1. The landscape is slightly more undulating while the mature policy trees and different areas of vegetation clearly show the remnants of a relict designed landscape associated with Earlshall. Leuchars Station borders Area 2 to the south and west.

### 1.2.2 Geology

According to the British Geological Survey, the superficial geology of the proposed development area consists of raised marine deposits, Devensian clay, silt, sand and gravel. These deposits formed up to two million years ago in the Quaternary period in a local environment dominated by shallow seas.

Given the location of the site close to the coast and the Eden estuary, the possibility for large deposits of windblown sand is considered. Such deposits have the potential to cover and mask archaeological deposits, protecting prehistoric features from disturbance should these be present on the site.

The bedrock geology is predominantly comprised of sandstone from the Glenvale Sandstone Formation. This dates to the Devonian period, 359 to 383 million years ago in a local environment dominated by rivers. The extreme north west of the watching brief area contains older strata of sandstone. Also dated to the Devonian period, the Scone Sandstone Formation formed approximately 393 to 419 million years ago.<sup>1</sup>

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<sup>1</sup> <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> - 23/12/19

## 2 Project Background

### 2.1 Development Proposals

The proposals to re-purpose Leuchars Station are wide ranging and involve a potential 15 separate projects designed to better suit the facilities to the present use of the site as an army barracks.

Of these, proposals to construct new sports pitches in Area 1 and a new Stable block in the south western corner of Area 2 were identified by the Mott MacDonald Heritage Team as having potential to disturb previously undiscovered archaeological deposits.

### 2.2 Geotechnical Investigations

Prior to development works proceeding, a series of geotechnical investigations were proposed around Leuchars Station. Of these 20 trial pits were identified as of suitable scale and location to merit archaeological monitoring.

### 2.3 Consultation

Fife Council was initially appraised of the proposals through a series of pre-application discussions in early 2019.

The Fife Council Archaeology Officer (Douglas Speirs) was contacted via email on 1<sup>st</sup> July 2019, responding on 2<sup>nd</sup> July with discussion via phone and email ongoing thereafter. During these discussions, the Archaeology Officer highlighted the potential for well-preserved prehistoric deposits to exist and that both Area A and Area B were within the Leuchars and Wormit Archaeological Area of Regional Importance (AARI) as designated by the Council as well as the GDL.

The Archaeology Adviser for DIO (Phil Abramson) was also appraised of the proposed works in advance of monitoring.

The GI works are not subject to planning consent from Fife Council, but given the location of these within the AARI and GDL, it was agreed that these would be monitored by a qualified archaeologist where appropriate.

## 3 Historical Sensitivity

### 3.1 Overview

Detailed cultural heritage desk based assessments have been prepared for Leuchars Station in the past, notably the Archaeological and Heritage Appraisal completed in 2018 by WYG.<sup>2</sup> The scope of this document is necessarily limited given the nature of the work and it is not necessary to repeat the findings of the WYG Archaeological and Heritage Appraisal to justify this work. However, a short summary is necessary to put the archaeological watching brief into context, with particular focus on the prehistoric evidence for occupation in the area.

Where monuments are Scheduled, these are referenced by their scheduling number, otherwise the ID number from the National Record of the Historic Environment is used.

### 3.2 Summary

The area to the north and west of Leuchars is notable for a rich concentration of prehistoric cropmarks indicative of prehistoric occupation. These include enclosures and settlements at Earlsall (SM6803) immediately bordering Leuchars Station to the north and cropmarks at Southfield (SM5065) comprising enclosures, barrows, pits and field systems. Ring ditches and enclosures are also recorded at Pusk Farm (SM6470) to the west. All of these monuments are protected as Scheduled Monuments, but there are further non-designated sites and findspots which demonstrate the level of prehistoric occupation in and around the Eden estuary.

A prominent hillfort sits at the mouth of the Eden estuary at Guardbridge (ID32939). Findspots include a flint axe head (ID33204) recorded just east of Leuchars and arrowheads, scraper and pottery (ID33234) recorded at Comerton immediately north. Most notable for the watching brief is the findspot for a carved stone ball (ID33188) recorded within the western end of Area 2

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<sup>2</sup> Skinner, T 2018 Defence Estate Optimisation Programme: Phase 1 Archaeological and Heritage Appraisal – Leuchars Station, WYG grey literature report



## 4 Methodology

### 4.1 Aims and Objectives

The objective of an archaeological watching brief is to ensure that no archaeological deposits are disturbed during the ground breaking works without these being adequately recorded and assessed for significance. Identification of archaeological deposits during the GI works will also inform any future archaeological mitigation during the development phase.

The trial pits excavated are necessarily small and only provide a limited insight into the archaeological potential of the site. However, they give an indication as to the build-up of stratigraphy and the expected level of the natural subsoil.

### 4.2 The Watching Brief

An archaeological watching brief involves a qualified and experienced archaeologist monitoring the excavations on site to ensure that any archaeological deposits are recognised, noted and adequately recorded.

All trenches were located by the GI Engineer in advance of excavation and scanned for services. Trenches were excavated in spits by a mechanical excavator using a 1.60m wide toothless bucket under direct archaeological supervision. When natural subsoil was reached, excavation halted while the trench was recorded before any further work took place. Given the nature of the clean sandy deposits across the site, often excavation was continued beyond the horizon of the undisturbed natural subsoil to ensure no archaeological features survived below windblown sand.

Each trial pit or trench excavated was numbered consecutively and the stratigraphic deposits encountered recorded as contexts on Mott MacDonald pro forma trench record sheets. Each context number is prefixed by the consecutive trench number assigned to each trench. Full details of the trenches monitored and the contexts encountered can be viewed in Appendices A and B respectively. A detailed photographic record of site works was also maintained.

## 5 Results

### 5.1 The Watching Brief

The watching brief failed to reveal any deposits of archaeological significance.

A total of 14 trial pits were monitored, nine around Area 1, and five in Area 2. The southern edge of Area 2 proved to be soft once the turf was cut, with a degree of waterlogging making it difficult to excavate the trenches cleanly. In addition, one proposed trial pit was located within an area of woodland at the western edge of Area 2, making this difficult to access. As a result, six trial pits proposed for monitoring were not excavated. A list of these can be viewed in Table 5.1.

**Table 5.1: List of Trial Pits removed from watching brief**

GI Number	Location
TP1005	Area B
TP1006	Area B
TP1008	Area B
TP1009	Area B
TPCBR1002	Area B
TPCBR1001	Area B

The trial pits varied in size and depth, and on the whole can be described as a mid-brown sandy loam topsoil sitting atop a very clean, loose orange brown or yellow brown sand (Photo 5.1 and Photo 5.2). The topsoil was very clean and homogenous, containing very few inclusions and modern detritus, with very few ceramic sherds.<sup>3</sup> This indicates that the land has not been extensively worked.

Only in Trench 3 was a potential archaeological deposit recorded. Deposit (302) consisted of firmly compact mid grey brown gravel with occasional angular cobbles. Further excavation revealed this to be a 0.10m deep working surface, likely associated with the construction of nearby houses on Adam Close. This deposit sat directly on top of a buried topsoil and is of negligible significance.

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<sup>3</sup> Ceramic sherds, bones and other midden material can be introduced through the deposition of night soil to fertilise agricultural land.



**Photo 5.1: Post-excavation shot of  
Trench 7(Photo 028)**



**Photo 5.2: SW facing section of trench 7  
(Photo 029)**



## 6 Conclusions and recommendations

### 6.1 Overview

The GI works were monitored as part of wide ranging proposals involving a potential 15 separate projects at Leuchars Station. Of these, two of the potential developments in Area 1 and Area 2 were identified as meriting archaeological monitoring.

Following the completion of the watching brief, it was decided that proposals to develop the Sports Pitch in Area 1 and the Stable block in Area 2 will not be advanced further and further work was unlikely.

### 6.2 Conclusions

The trial pits excavated at Leuchars Station were necessarily limited in scope and from these it is not possible to ascertain the presence or otherwise of stratified archaeological deposits across the wider development area.

However, no significant archaeological deposits were recorded during the watching brief.

### 6.3 Recommendations

In agreement with the Consultation response from Fife Council Archaeology Officer, Mott MacDonald recommend that a programme of archaeological evaluation be completed at any location within the AARI, GDL or wider Leuchars Station where significant ground breaking works are proposed and where it can be proved that the locations of such works have previously been undisturbed by 20<sup>th</sup> and 21<sup>st</sup> century development.

While the extent of any archaeological mitigation will be dependent upon the nature and detail of the proposed development, it is anticipated that a programme of archaeological trial trenching would be necessary in advance of site works associated with the areas monitored. However, given the decision not to advance proposals for the Sports pitch or Stable block, further work associated with this project is considered unlikely.

## 7 Bibliography

### 7.1 Documentary

Abramson, P 2005 RAF Leuchars, Land adjacent to Earlshall Castle Estate: Archaeology and Historic Environment Appraisal, Defence Estates grey literature report

Chartered Institute for Archaeologists (CIfA) 2014 Standards and Guidance for an archaeological watching brief

Holland, K 2012 RAF Leuchars Base, Archaeology and Heritage Key Risks: Background Text, WYG grey literature report

Skinner, T 2018 Defence Estate Optimisation Programme: Phase 1 Archaeological and Heritage Appraisal – Leuchars Station, WYG grey literature report

### 7.2 Digital

<http://www.bgs.ac.uk/> - accessed 23/12/19

[www.canmore.org.uk](http://www.canmore.org.uk) – accessed 23/12/19

<http://maps.nls.uk/> - accessed 23/12/19

<https://www.scottishheritagehub.com> – accessed 23/12/19

# Acknowledgements

Mott MacDonald would like to thank Structural Soils Ltd and the DIO team at Leuchars Station for the smooth completion of the project.

Thanks are also due to Steven Reaper of Steven Reaper Agri and Groundworks Contractor for his patience, company and good humour during the completion of the fieldwork.

The Archaeology Officer at Fife Council, Douglas Speirs deserves our thanks for his patience, advice and assistance during the planning and execution of the watching brief.

## Appendix A – Trench Register

Trench number	GI Number	Orientation	Length	Depth
1	TPCBR101	NNW-SSE	2.30m	1.05m
2	TPCBR102	SW-NE	1.90m	1.05m
3	TPCBR103	NW-SE	2.40m	1.10m
4	TP101	NW-SE	2.60m	0.80m
5	TP102	NW-SE	2.30m	0.70m
6	TP103	NW-SE	2.80m	1m
7	TP104	NW-SE	2.80m	0.45m
8	TP106	NW-SE	3m	1m
9	TP105	NW-SE	3.85m	0.65m
10	TP1007	N-S	2.70m	0.90m
11	TP1003	N-S	2.80m	0.50m
12	TP1002	N-S	3m	1.20m
13	TP1001	N-S	3.2m	0.80m
14	TP1004	N-S	3.1m	0.50m

## Appendix B – Context Register

Context Number	Trench	GI Number	Type	Description	Depth	Comments	Date	Initial
101	1	TPCBR101	Deposit	Moderately compact mid brown sandy loam with rare medium angular stones and occasional charcoal flecks. Softer with depth.	1.05m	Topsoil.	21/10/2019	RC
102	2	TPCBR101	Deposit	Loosely compact, clean orange brown sand.	-	Undisturbed natural subsoil.	21/10/2019	RC
201	2	TPCBR102	Deposit	Moderate to firmly compact mid brown sandy loam with occasional to frequent stone and charcoal flecks. Occasional pieces of modern detritus.	0.65m	Topsoil.	21/10/2019	RC
202	2	TPCBR101	Deposit	Looser, softer sandier yellow brown loam. Diffuse horizon with (201).	-	Possible natural subsoil.	21/10/2019	RC
301	3	TPCBR103	Deposit	Moderately compact dark brown sandy loam with rare medium angular stones and occasional charcoal flecks.	0.50m	Topsoil.	21/10/2019	RC
302	3	TPCBR103	Deposit	Firmly compact mid grey brown, slightly sandy gravel (element of clay) with occasional angular cobbles.	0.10m	Working surface. Likely associated with construction of nearby houses.	21/10/2019	RC
303	3	TPCBR103	Deposit	More mottled dark grey brown and mid brown sandy loam with occasional charcoal flecks.	0.50m	Topsoil.	21/10/2019	RC
304	3	TPCBR103	Deposit	Soft orange brown sand.	-	Undisturbed natural subsoil.	21/10/2019	RC

Context Number	Trench	GI Number	Type	Description	Depth	Comments	Date	Initial
401	4	TP101	Deposit	Soft to moderately compact dark brown sandy loam with rare medium angular stones and occasional charcoal flecks. Homogenous.	0.80m	Topsoil.	21/10/2019	RC
402	4	TP101	Deposit	Very clean, soft orange yellow sand.	-	Undisturbed natural subsoil.	21/10/2019	RC
501	5	TP102	Deposit	Moderately compact sandy loam with occasional flecks of stone and charcoal increasing with depth.	1m	Topsoil.	21/10/2019	RC
502	5	TP102	Deposit	Very clean, soft orange yellow sand.	-	Undisturbed natural subsoil.	21/10/2019	RC
601	6	TP103	Deposit	Moderately compact dark brown sandy loam with occasional flecks of stone and charcoal increasing with depth.	1m	Topsoil.	22/10/2019	RC
602	6	TP103	Deposit	Very clean, soft orange yellow sand.	-	Undisturbed natural subsoil.	22/10/2019	RC
701	7	TP104	Deposit	Moderately compact mid brown sandy silt with occasional flecks of stone and charcoal.	0.40m	Topsoil.	22/10/2019	RC
702	7	TP104	Deposit	Very clean, soft orange yellow sand.	-	Undisturbed natural subsoil.	22/10/2019	RC
801	8	TP106	Deposit	Moderately compact mid brown sandy loam with rare flecks of charcoal.	0.40m	Topsoil.	22/10/2019	RC
802	8	TP106	Deposit	Mid orange brown sand.	-	Undisturbed natural subsoil.	22/10/2019	RC

Context Number	Trench	GI Number	Type	Description	Depth	Comments	Date	Initial
901	9	TP105	Deposit	Moderately compact mid brown sandy loam. Very clean and homogenous with a single sherd of 20th century ceramic (not retained).	0.65m	Topsoil.	22/10/2019	RC
902	9	TP105	Deposit	Moderate to soft compact orange brown fine grain sand.	-	Undisturbed natural subsoil.	22/10/2019	RC
1001	10	TP1007	Deposit	Moderately compact mid brown sandy silt/loam. Looser at top.	0.90m	Topsoil.	22/10/2019	RC
1002	10	TP1007	Deposit	Soft, yellow brown fine grain sand. Very clean.	-	Undisturbed natural subsoil.	22/10/2019	RC
1101	11	TP1003	Deposit	Moderately compact mid brown sandy loam. Very clean with rare charcoal flecks.	0.45 - 0.50m	Topsoil.	22/10/2019	RC
1102	11	TP1003	Deposit	Slightly mottled orange brown and mid brown sand, darker at top and cleaner with depth. Diffuse horizon with (1101). Possibly a disturbed surface.	-	Natural subsoil.	22/10/2019	RC
1201	12	TP1002	Deposit	Mid to dark brown loose sandy loam. Extensive bioturbation and root intrusion.	0.50m	Topsoil.	22/10/2019	RC
1202	12	TP1002	Deposit	Moderately compact mid brown, slightly mottled orange brown sandy loam. No inclusions.	0.70m	-	22/10/2019	RC
1203	12	TP1002	Deposit	Soft to moderately compact yellow brown fine sand.	-	Undisturbed natural subsoil.	22/10/2019	RC
1301	13	TP1001	Deposit	Dark brown loose loam.	0.40m	Topsoil.	22/10/2019	RC

Context Number	Trench	GI Number	Type	Description	Depth	Comments	Date	Initial
1302	13	TP1001	Deposit	Moderately compact mid brown sandy loam. Very clean. Sherd of 19th century ceramic (not retained) at 0.70m depth.	0.40m	-	22/10/2019	RC
1303	13	TP1001	Deposit	Soft to moderately compact orange brown fine sand.	-	Undisturbed natural subsoil.	22/10/2019	RC
1401	14	TP1004	Deposit	Moderately compact mid grey brown sandy clay silt.	0.50m	Topsoil.	22/10/2019	RC
1402	14	TP1004	Deposit	Firmly compact orange brown and with an element of clay.	-	Undisturbed natural subsoil.	22/10/2019	RC



## Appendix C – Photographic Register

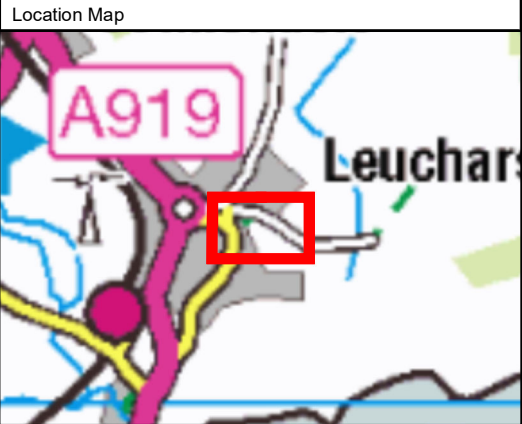
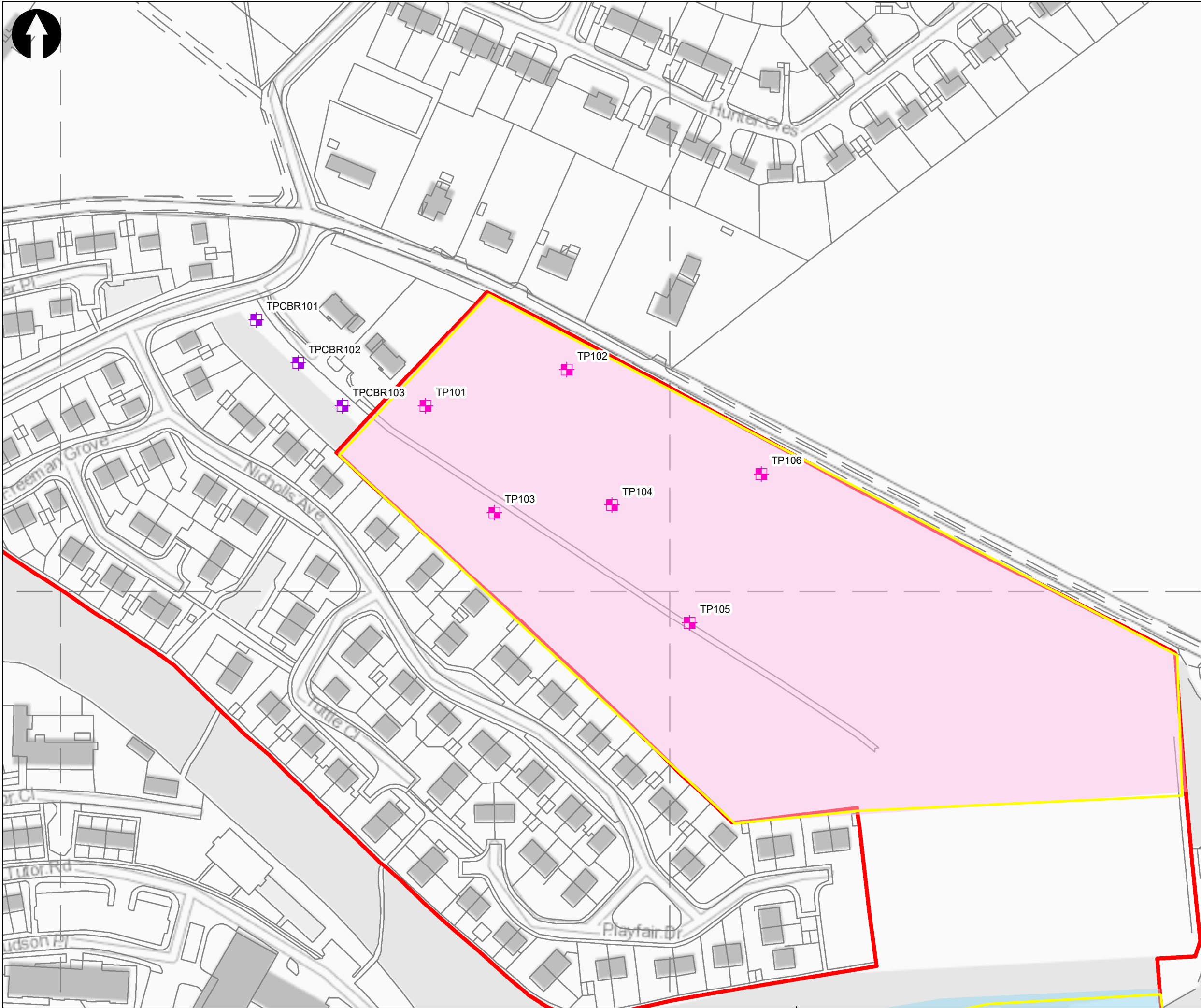
Photo Number	Trench	Direction facing	Description	Date	Initials
001	1	SE	Pre-excavation shot	21/10/2019	RC
002	1	E	Working shot	21/10/2019	RC
003	1	SE	Post-excavation shot	21/10/2019	RC
004	1	NE	SW facing section	21/10/2019	RC
005	2	E	Pre-excavation shot	21/10/2019	RC
006	2	NE	Post-excavation shot	21/10/2019	RC
007	2	SE	NW facing section	21/10/2019	RC
008	3	NW	Pre-excavation shot	21/10/2019	RC
009	3	NW	Mid-excavation shot showing (302)	21/10/2019	RC
010	3	SW	NE facing section - mid-excavation	21/10/2019	RC
011	3	NW	Post-excavation shot	21/10/2019	RC
012	3	NE	SW facing section	21/10/2019	RC
013	3	NW	Post-excavation shot	21/10/2019	RC
014	4	SE	Pre-excavation shot	21/10/2019	RC
015	4	E	Working shot	21/10/2019	RC
016	4	NE	SW facing section	21/10/2019	RC
017	4	SE	Post-excavation shot	21/10/2019	RC
018	5	E	Pre-excavation shot	21/10/2019	RC
019	5	SW	Post-excavation shot	21/10/2019	RC
020	5	NE	SW facing section	21/10/2019	RC
021	6	E	Pre-excavation shot	22/10/2019	RC
022	6	NW	Working shot	22/10/2019	RC
023	6	NW	Post-excavation shot	22/10/2019	RC
024	6	SW	NE facing section	22/10/2019	RC
025	6	NW	Working shot	22/10/2019	RC
026	7	W	Pre-excavation shot	22/10/2019	RC
027	7	W	Working shot	22/10/2019	RC
028	7	SE	Post-excavation shot	22/10/2019	RC
029	7	NE	SW facing section	22/10/2019	RC
030	9	SE	Pre-excavation shot	22/10/2019	RC
031	9	SE	Post-excavation shot	22/10/2019	RC
032	9	SW	NE facing section	22/10/2019	RC
033	8	SW	Pre-excavation shot	22/10/2019	RC
034	8	NW	Working shot	22/10/2019	RC
035	8	NW	Post-excavation shot	22/10/2019	RC
036	8	SW	NE facing section	22/10/2019	RC

Photo Number	Trench	Direction facing	Description	Date	Initials
037	8	NW	Working shot - deeper excavation	22/10/2019	RC
038	-	E	Working shot - Earlishall	22/10/2019	RC
039	-	E	Working shot - Earlishall	22/10/2019	RC
040	-	S	Working shot - view of GDL southern area	22/10/2019	RC
041	10	SW	Pre-excavation shot	22/10/2019	RC
042	10	S	Post-excavation shot	22/10/2019	RC
043	10	W	E facing section	22/10/2019	RC
044	10	E	Working shot - location of Trench 10	22/10/2019	RC
045	11	W	Pre-excavation shot	22/10/2019	RC
046	11	N	Working shot	22/10/2019	RC
047	11	NW	Working shot - monitoring	22/10/2019	RC
048	11	NW	Working shot - monitoring	22/10/2019	RC
049	11	NW	Working shot - monitoring	22/10/2019	RC
050	11	NW	Working shot - monitoring	22/10/2019	RC
051	11	NW	Working shot - monitoring	22/10/2019	RC
052	11	N	Post-excavation shot	22/10/2019	RC
053	11	W	E facing section	22/10/2019	RC
054	11	W	Working shot - location of Trench 11	22/10/2019	RC
055	12	E	Pre-excavation shot	22/10/2019	RC
056	12	N	Post-excavation shot	22/10/2019	RC
057	12	W	E facing section	22/10/2019	RC
058	13	S	Pre-excavation shot	22/10/2019	RC
059	13	S	Post-excavation shot	22/10/2019	RC
060	13	W	E facing section	22/10/2019	RC
061	14	NW	Pre-excavation shot	22/10/2019	RC
062	14	N	Post-excavation shot	22/10/2019	RC
063	14	W	East facing section	22/10/2019	RC

# Appendix D – Figures

Table D.1: Figures within Appendix B

Figure Number	Title
Figure 1	Area 1 – Sports Pitch
Figure 2	Area 2 – Technical Area - East



- Key
- Site Boundary
  - Development Boundaries
  - Development Areas**
    - Area 1 – URD Project No. 2.1 Sports Pitch
    - Area 2 - Technical
    - Area 3 - URD Project No. 2.11 – Obstacle Course
    - Area 4 – East of Site
  - Proposed GI July 2019**
    - Cable Percussive Borehole
    - Cable Percussive Borehole (25m)
    - Dynamic Sampling Borehole
    - Trial Pit
    - Trial Pit with In-Situ CBR
    - Infiltration Test Pit
    - Foundation Inspection Pit

A	26/07/19	SEY	Revised Scope	JA	JA
Rev	Date	Drawn	Description	Ch'k'd	App'd

M

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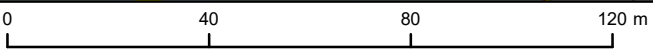
Defence Infrastructure Organisation

Title

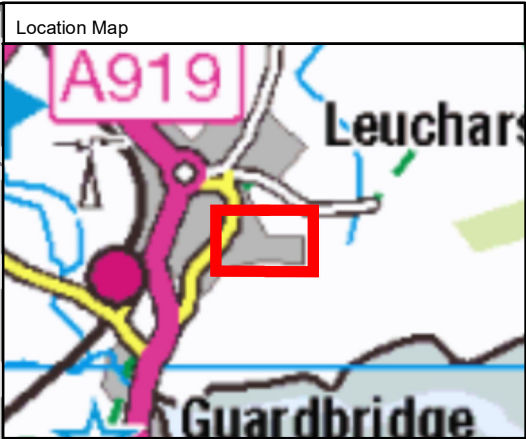
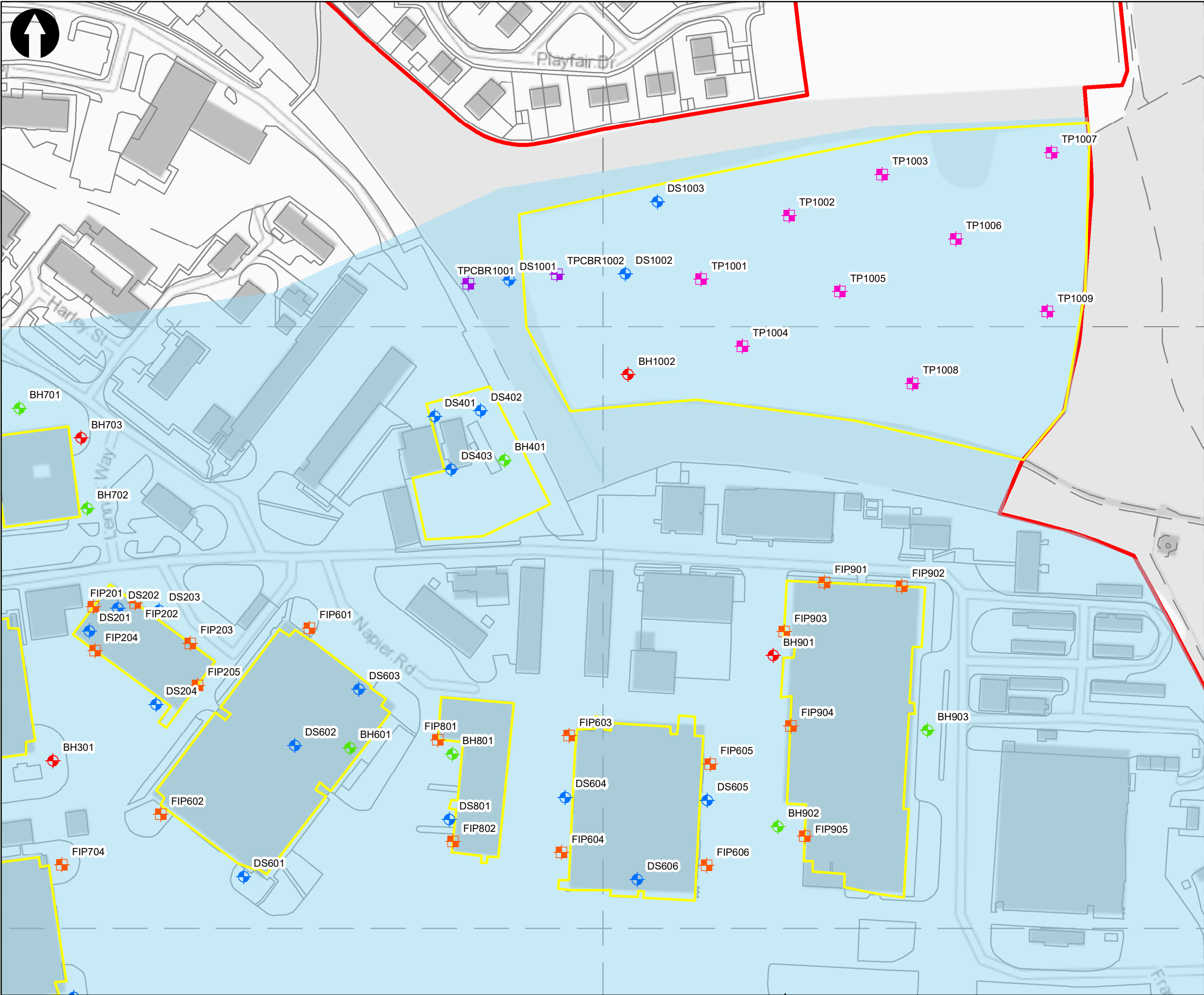
Leuchars Station - Phase 5 Ground Investigation  
Exploratory Hole Location Plan  
Area 1 - Sports Pitch

Designed	SEY		Eng Check	JA	
Drawn	SEY		Coordination	SEY	
GIS Check	SEY		Approved	JA	

Scale at A3 1:1,500	Status For Information	Rev A	Security STD
Drawing Number 400620-MMD-00-XX-DR-U-0011			







- Key
- Site Boundary
  - Development Boundaries
  - Development Areas
    - Area 1 – URD Project No. 2.1 Sports Pitch
    - Area 2 - Technical
    - Area 3 - URD Project No. 2.11 – Obstacle Course
    - Area 4 – East of Site
  - Proposed GI July 2019
    - Cable Percussive Borehole
    - Cable Percussive Borehole (25m)
    - Dynamic Sampling Borehole
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    - Trial Pit with In-Situ CBR
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A	26/07/19	SEY	Revised Scope	JA	JA
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Title

Leuchars Station - Phase 5 Ground Investigation  
Exploratory Hole Location Plan  
Area 2 - Technical Area (East)

Designed	SEY		Eng Check	JA	
Drawn	SEY		Coordination	SEY	
GIS Check	SEY		Approved	JA	

Scale at A3 1:1,500	Status For Information	Rev A	Security STD
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Drawing Number

400620-MMD-00-XX-DR-U-0013

