



**Data Entry Conventions and Best
Practice for Basic Land and Property
Unit (BLPU) Polygons**

**DEC-BLPU-P
Version 1**

A Reference Document

GeoPlace LLP

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DEC-BLPU-P

Table of Contents

Table of Contents

1. FOREWORD	5
1.1 PURPOSE OF THIS DOCUMENT	5
2. ABOUT THIS REFERENCE DOCUMENT	7
2.1 BACKGROUND	7
2.2 COPYRIGHT.....	7
2.3 COMMENTING ON THIS DOCUMENT	7
3. INTRODUCTION	8
3.1 INTRODUCTION TO THIS DOCUMENT.....	8
3.2 DEFINITIONS USED THROUGHOUT THIS DOCUMENT.....	8
3.3 SCOPE OF THIS DOCUMENT.....	9
4. BLPU POLYGON EXTENT RECORD	10
4.1 DEFINITION AND BACKGROUND	10
4.2 CONFIDENCE LEVEL.....	10
4.3 VERSIONING.....	12
4.4 POLYGON UNIQUE ID.....	14
4.5 BLPU POLYGON EXTENT RECORD ATTRIBUTE TABLE	14
5. ADDING NEW POLYGONS	15
5.1 BACKGROUND	15
5.2 METADATA.....	15
5.3 BLPU EXTENT PROVENANCES	16
5.4 REPRESENTATIVE POINT CODE	16
5.5 DATA ATTRIBUTES	16
5.6 DATA QUALITY – SOURCE, SCALE AND ACCURACY	17
5.7 CONFIDENCE FLAG	17
5.8 BEST PRACTICE	19
5.9 DEFINITION OF BOUNDARY BETWEEN STREET, LAND AND PROPERTY	20
5.10 BASE MAPPING INFERRED LINES.....	21
5.11 PARENT/CHILD RELATIONSHIPS.....	21
5.12 STREETS	22
6. MAINTAINING EXISTING POLYGONS	25
6.1 BACKGROUND	25
6.2 VERSIONING.....	25
6.3 EFFECT OF CHANGE ON ADJOINING BLPU POLYGONS	25
7. EXAMPLES AND DIAGRAMS	27
7.1 INFERRED LINES.....	27
7.2 ACCESS SPLAYS.....	32
7.3 SHARED ACCESS-WAYS	34
7.4 REAR ACCESS-WAYS.....	35
7.5 BLOCKS OF PROPERTIES.....	38
7.6 OVERLAPPING BLPU EXTENTS.....	40
7.7 NAMED GROUPS OF PROPERTIES	41

DEC-BLPU-P

Table of Contents

7.8	PROPERTY FOOTPRINTS AND ESTATE BOUNDARIES	44
7.9	INDUSTRIAL ESTATES / BUSINESS PARKS	45
7.10	SHOPPING PARADES	47
7.11	FARMSTEADS AND FIELDS	49
7.12	MULTIPLE BLPU S WITHIN ONE SITE.....	49
7.13	LOCAL AUTHORITY BOUNDARY	50
7.14	STREET BLPU POLYGON EXTENTS.....	52
7.15	JUNCTIONS	53
7.16	ROUNDBABOUTS	53
7.17	OBJECTS WITHOUT A POSTAL ADDRESS (OWPAs)	56
7.18	WALL-MOUNTED ADVERTISEMENTS.....	56
APPENDIX A - OBJECTIVE OF GAZETTEERS POLYGON WORKING GROUP		57
REMIT OF THE GAZETTEERS POLYGON WORKING GROUP		57
1.	OVERVIEW	57
2.	PROPERTY TYPES.	57
3.	DOCUMENT THE RULES FOR BLPU POLYGON CAPTURE.....	57
4.	DOCUMENT THE RULES FOR USE OF BLPU POLYGONS	58
5.	DOCUMENT THE RULES FOR MAINTENANCE / PAI	58
6.	TRANSFER FORMAT/S.....	58
APPENDIX B - INITIAL DATA CAPTURE		59
1. BACKGROUND		59
1.1	PURPOSE OF THIS APPENDIX.....	59
2.	MULTIPLE BUILDINGS WITHIN A SINGLE PROPERTY CURTILAGE.....	59
3.	MULTIPLE BLPU POINTS WITHIN A SINGLE PROPERTY	61
4.	STRAY BLPU POINTS (BLPU POINTS WHICH APPEAR TO BE IN THE WRONG PLACE)	62
5.	COMPLEX PROPERTY STRUCTURES.....	65
6.	FARMSTEADS	66
APPENDIX C - BUSINESS CASE		68
BUSINESS JUSTIFICATION		68
1.	REASONS FOR IMPLEMENTING BLPU POLYGONS.....	68
2.	DRIVERS FOR THE BUSINESS CASE	69
3.	DRIVERS FOR THE USERS OF BLPU POLYGON DATA	69
4.	DRIVERS FOR THE CREATORS OF BLPU POLYGONS	70
5.	BENEFITS	74
6.	BUSINESS IMPACT	74
7.	USE OF BLPU POLYGONS	76
	78
8.	CONCLUSION.....	78
APPENDIX D – GLOSSARY OF TERMS		79

DEC-BLPU-P

Table of Figures

Table of Figures

Figure 1 - Confidence Levels in a BLPU Polygon. Life Cycle – Life (Maintenance)	11
Figure 2 - Example of a reliability matrix.....	12
Figure 3 - Polygon Version life cycle (brackets indicate examples of the type of change)	13
Figure 4 - BLPU Extent Record	14
Figure 5 – Provenance Codes.....	16
Figure 6 - Basemap without up to date information.....	18
Figure 7 - Developer's plan laid over basemap.....	18
Figure 8 - BLPU Polygons drawn over developer's plan.....	19
Figure 9 - BLPU Polygons without developer's plan.....	19
Figure 10 - Street BLPU based on property access.....	20
Figure 11 - Parent BLPU extent covers Child BLPU extents.....	22
Figure 12 - Parent BLPU with Child BLPU extents 'cut out'.....	22
Figure 13 - Alleyway BLPU extents.....	23
Figure 14 - Street BLPU Polygon for an alleyway.....	24
Figure 15 - Four BLPU's with a confidence level of 2.....	25
Figure 16 - Effect of change on BLPU Polygons.....	26
Figure 17 – Base mapping requiring inferred lines.....	27
Figure 18 - BLPU Polygon extents using inferred lines.....	28
Figure 19 – Base mapping cannot be relied upon for inferred lines.....	29
Figure 20 - BLPU Polygons with inferred lines.....	29
Figure 21 - Inferred lines shown in pink.....	30
Figure 22 - BLPU Polygon extents based on inferred lines if appropriate.....	30
Figure 23 - Base mapping requiring inferred lines.....	31
Figure 24 - Front Property inferred lines.....	31
Figure 25 - Access Splays example - See 205 Trowell Road.....	32
Figure 26 - Shared access splays.....	32
Figure 27 - Shared access splays spilt in half.....	33
Figure 28 - Base mapping rear property access splays.....	33
Figure 29 - BLPU Polygon extents with inferred lines to capture rear property access splays.....	34
Figure 30 - Shared driveway.....	34
Figure 31 - Shared driveway with BLPU Polygons.....	35
Figure 32 - Rear access through property gardens.....	36
Figure 33 - Single BLPU Polygons where rear access goes through gardens.....	36
Figure 34 - Rear access-ways base mapping.....	37
Figure 35 – Multi part BLPU Polygon where rear access goes through gardens.....	37
Figure 36 - Named block of properties.....	38
Figure 37 - Named block of properties with BLPU Polygons.....	38
Figure 38 - Base mapping data with BLPU Points.....	39
Figure 39 - With BLPU Polygon extents shown.....	39
Figure 40 – Example of split level premises.....	40
Figure 41 -Acceptable use of overlapping BLPU Polygons.....	41
Figure 42 - Named cottages.....	42
Figure 43 - Parent and Child BLPU Polygons.....	42
Figure 44 - Named group of properties where full PAO extent is known.....	43
Figure 45 - Named group of properties.....	43
Figure 46 - Property Footprint Estate.....	44
Figure 47 - Industrial Estate.....	45
Figure 48 - Site with units.....	46
Figure 49 - Site with units with BLPU Polygons.....	46
Figure 50 - No unambiguous map data.....	47
Figure 51 - Shops using building footprint.....	48
Figure 52 - Farmstead with multiple BLPU's.....	49
Figure 53 - Golf Course and other non-postal addresses.....	50
Figure 54 - Authority boundary over property extent.....	51
Figure 55 - Authority Boundary over property extent with BLPU Polygons.....	51
Figure 56 - Footpath extents.....	52
Figure 57 - Examples of road priorities.....	53

DEC-BLPU-P

Table of Figures

Figure 58 - Named roundabout.....	54
Figure 59 - Flyovers.....	55
Figure 60 - Flyover with BLPU Polygons.....	55
Figure 61 - Wall mounted advertisement.....	56
Figure 62 - Multiple Buildings within a single curtilage example.....	59
Figure 63 - No map features to determine boundary.....	60
Figure 64 - No map features to determine boundary with BLPU Polygons.....	61
Figure 65 - Multiple BLPU Points within a single property.....	62
Figure 66 - Stray BLPU Points.....	63
Figure 67 - Curtilages with more than 1 BLPU Point.....	64
Figure 68 - Curtilages with more than 1 BLPU Point with BPLU extents.....	64
Figure 69 - Complex Property Structure with Boundaries Shown.....	65
Figure 70 - Collective grouping by BLPU Polygon.....	66
Figure 71 - Farmstead with Multiple BLPUs.....	67

Document Status

Version History

Version	Purpose	Date
Version 0	For consultation	January 2012
Version 1	Published version	September 2012

Policy changes in DEC-BLPU-P v1

This table provides a summary of the differences between DEC-BLPU-P v0 (consultation version 0) and DEC-BLPU-P v1. Typographical and formatting changes are not listed.

Section in v0	Section in v1	Summary of change
5.3	4.3	Custodian controlled versioning adopted. Other options removed.
6.6.3	5.6.3	Accuracy of data source recorded in metadata record adopted. Other options removed.
6.8	5.7.3	A point is sufficient for OWPA's with an insignificant footprint adopted. Other options removed.
8.3	7.3.2	If there is a requirement to include shared driveways in all BLPU Polygons which abut and adjoin the driveway, then use a Provenance code of U inferred from use.
8.4	7.4.2	If rear access-ways which split rear gardens are included in all the BLPU Polygons which abut and adjoin the access-way, then use a Provenance code of U inferred from use.
8.4	7.4.2	If rear access-ways which split a rear garden are excluded from the BLPU Polygon for the garden, then use a Provenance code of P inferred from physical.
8.5.2	7.5.3	Clarifies how to deal if there is only 1 block within the curtilage of a site and subdivisions of the site are not clear.
8.14	7.14	If two or more Street BLPU Polygons meet at a junction, then the Polygons are drawn as complete through polygons. Other options removed.

DEC-BLPU-P

1. Foreword

1.1 Purpose of this document

- 1.1.1 The purpose of this document is to define the data entry conventions for creating and maintaining Basic Land and Property Unit (BLPU) Polygons. A BLPU Polygon describes the inferred geographical extent of a land and property unit associated with its use in an authority's land and property gazetteer. Interest in this subject has come from the land and property gazetteer user community. In particular the members of the community who currently maintain such data wish to improve how they maintain the data more efficiently and consistently across local government. This document is for those who currently maintain BLPU Polygon data and for all those, equally importantly, who wish to understand the reasons and business benefits of why some authorities take the time and effort to maintain this type of data.
- 1.1.2 The then Local Government Information House (LGIH) was asked to set up a Gazetteers Polygon Working Group (GPWG) to produce a document in accordance with the remit set out in [Appendix A](#) of this document. LGIH's responsibilities were transferred to GeoPlace LLP on the 1st April 2011. GeoPlace LLP is a public sector Limited Liability Partnership (LLP) jointly owned by the Local Government Association and Ordnance Survey, specifically set up to develop national geographical and spatial information infrastructure projects.
- 1.1.3 This document represents the culmination of the significant effort made by individual contributions that members of the GPWG made to the design, construction and detailed description of the work that members of the group undertake daily as part of their officer roles in local government and in certain instances the private sector in partnership with local government. As such their contribution to this process should be greatly valued and not be under-estimated.
- 1.1.4 Initially the GPWG was established under the leadership and guidance of LGIH who engaged the services of a private sector consultancy group to progress the document process and finally hand back the results to LGIH and latterly GeoPlace to undertake the final ratification process. Throughout the construction of the document numerous issues were discussed and agreed upon by the GPWG. Those that could not be agreed upon were documented as questions requiring further consultation with the wider community in order to reach agreement on how those particular issues can be resolved.
- 1.1.5 The subject matter of this document is such that it is inextricably linked to the core maintenance issues associated with the NLPG and as such a number of the consultation questions were also linked to DEC-NLPG and DTFv7.3 documents which were re-published in December 2011. For full details of the scope of this document, see [Section 3.3](#).

DEC-BLPU-P

Section 1 - Foreword

- 1.1.6 Care has been taken to structure the document in the form of how the maintenance process in an authority works in real life. It therefore documents the business process, business rules, rulebase for data entry and the conventions for maintenance of the data in three sections.
- 1.1.7 The GPWG decided that the rules for initial data capture should form a stand-alone [Appendix B](#) to the document on the basis that this part of the document does not in essence represent a data entry convention but provides guidance on how to undertake the initial set up element of establishing BLPU Polygons.
- 1.1.8 The GPWG decided that the business case should form a stand-alone [Appendix C](#) to the document on the basis that this part of the document does not in essence represent a data entry convention but provides the justification for undertaking and continuing the work.

DEC-BLPU-P

Section 2 –About this Reference Document

2. About this Reference Document

2.1 Background

- 2.1.1 The Gazetteers Polygon Working Group (GPWG) was established in 2008 by the Local Government Information House (LGIH) after increasing requests from Contributing Authorities for guidance on how to capture spatial extent polygons for BLPU Records held in Local Land and Property Gazetteers (LLPGs).
- 2.1.2 Membership of the GPWG was drawn from volunteer representatives from Contributing Authorities with interests in this specific subject area.
- 2.1.3 LGIH engaged the services of a private sector consultancy group for a limited period in early 2008, to provide lead, direction, coordination and document production resources.
- 2.1.4 LGIH set the GPWG the objective of writing a document which defines how polygons are constructed, maintained and referenced to the LLPG at a land, property and Street level. For more information, see [Appendix A](#).
- 2.1.5 For an example of a business case to justify the creation and maintenance of BLPU Polygons, see [Appendix C](#).
- 2.1.6 The DEC-BLPU-P is distributed as a PDF file. It is designed to be read on-screen, although users may print a copy if required. Colour printing is recommended to maintain clarity of the diagrams.

2.2 Copyright

- 2.2.1 All Intellectual Property Rights in this document are held by GeoPlace LLP a public sector Limited Liability Partnership (LLP) jointly owned by the Local Government Association and Ordnance Survey. It is a public domain document and may be copied, quoted, published and distributed with attribution freely but not re-sold.

2.3 Commenting on this document

- 2.3.1 If you wish to make any comments on this document please contact:
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DEC-BLPU-P

3. Introduction

3.1 Introduction to this document

- 3.1.1 This document is the DEC-BLPU-P. Its purpose is to expand on the Data Entry Conventions and Best Practice described in the DEC-NLPG v 3.2, in particular to provide guidance on how to create and maintain BLPU Polygon data which is compliant with BS 7666-2:2006.
- 3.1.2 The DEC-BLPU-P is for the use of anyone in Contributing Authorities capturing BLPU Polygons for association with and linking to their data. The reader should be familiar with BS 7666-2:2006, the current version of the DEC-NLPG and DTF v7.3 or, as a minimum, liaise with the Authority Address Custodian in the Contributing Authority when creating BLPU Polygons.
- 3.1.3 This document provides the following:
- Rules to apply when adding new BLPU Polygons for those Contributing Authorities which have created BLPU Polygons.
 - Rules to apply when amending existing polygons for those Contributing Authorities which have created BLPU Polygons and have reached the maintenance stage of the process.
- 3.1.4 For guidance on carrying out an initial data capture exercise in an authority where no BLPU Polygons exist, see [Appendix B](#).

3.2 Definitions used throughout this document

- 3.2.1 The following verbs are used throughout this document in accordance with the implication and context shown.

Verb	Implication	Context
Must	An absolute requirement	BS 7666-1:2006 and BS 7666-2:2006 DEC-NLPG document implementation requirement.
Shall	An absolute requirement	BS 7666-1:2006 and BS 7666-2:2006 standard requirement.
Should	A recommendation	BS 7666-1:2006 and BS 7666-2:2006 standard or a DEC-NLPG document implementation recommendation. A particular item may be ignored, but the full implications shall be understood and carefully weighed beforehand.
May	Permission	BS 7666-1:2006 and BS 7666-2:2006 standard or a DEC-NLPG document implementation permission.
Can	Possibility or capability	BS 7666-1:2006 and BS 7666-2:2006 standard or a DEC-NLPG document implementation information.
Is	Description	BS 7666-1:2006 and BS 7666-2:2006 standard or a DEC-NLPG document implementation description.

- 3.2.2 For a glossary of defined terms, see **Appendix A** of the DEC-NLPG and [Appendix D](#) of this document. Terms which appear in the glossary of defined terms are identified within this document by a capital first letter.
- 3.2.3 References to **Sections**, **Figures** and **Appendices** are shown in bold.

DEC-BLPU-P

3.2.4 Field names used in the Attribute tables are shown by the use of all capitals, for example, CHANGE_TYPE.

3.3 Scope of this document

- 3.3.1 This document provides the business case for the creation and use of BLPU Polygons and the rules for their capture and maintenance. BLPU Polygons for all NLPG Records are within scope. Polygons which describe Streets held in NSG data are not included in this document. More work is required to fully describe those polygon extents.
- 3.3.2 References to Street BLPU Polygons in this document mean polygons which are associated with a BLPU which has a PAON of Street Record in terms of the extent of addresses associated with that Street. This is different from extents associated with USRNs which are not within the scope of this document. For further information on the use of Street BLPUs, see the current version of the DEC-NLPG.
- 3.3.3 This document recognises that some authorities may have already captured BLPU Polygons using different criteria from those specified in the DEC-BLPU-P. It is recommended that the requirements described in the business case in [Appendix C](#) are taken into account when new BLPU Polygons are created. This is because future national and local partnership initiatives might require this data to be available in a standard format.
- 3.3.4 This document does not recommend that BLPU Polygons replace GIS data captured throughout an authority. It recommends that the BLPU Polygon layer be made available to all those who create GIS data, in order that they may refer to it and use or copy the BLPU Polygons in a consistent manner when they need to.
- 3.3.5 INSPIRE¹ is a Europe-wide Directive which provides rules for an infrastructure for spatial information. These rules ensure that data is stored, made available and maintained at the most appropriate level. INSPIRE has published a data specification of cadastral parcels which is appropriate for the capture and maintenance of legal title extents. The BLPU Polygon extent defined in this document recommends the use of the inferred from physical features BLPU Provenance and therefore this specification is not relevant to this document. However the process defined in the specification may be useful when it is complete.
- 3.3.6 The structure of this document is:
- An Introduction.
 - The definition of terms used throughout this document.
 - The new data attributes for Polygon Extent Records.
 - The rules for adding new BLPU Polygons.
 - The rules for maintaining BLPU Polygons.
 - Examples and diagrams to demonstrate best practice.

¹ - D2.8.1.6 INSPIRE Data Specification on *Cadastral Parcels* – Guidelines
http://inspire.jrc.ec.europa.eu/documents/Data_Specifications/INSPIRE_DataSpecification_CP_v3.0.pdf

DEC-BLPU-P

Section 4 – BLPU Polygon Extent Record

4. BLPU Polygon Extent Record

4.1 Definition and background

- 4.1.1 This section provides background and data entry conventions for the creation of BLPU Polygon extent Records. It includes details of three additional attributes to the extent Record; the Confidence Level, the Polygon Version and the Polygon Unique ID.
- 4.1.2 Contributing Authorities should create and maintain BLPU Polygons for all Approved BLPU Records which are held in their gazetteer. For the exception to this, see [Section 5.8.3](#).
- 4.1.3 Each polygon should relate to the full land or property extent of the BLPU, and not simply to any building which exists within the land or property extent.
- 4.1.4 The latest point at which a new BLPU Polygon is created is when the BLPU Record is Approved within the data. For details of when a Record is Approved, see current version of the DEC-NLPG.
- 4.1.5 When a BLPU Polygon is created it is always Version 1.
- 4.1.6 When a BLPU Polygon is created a confidence level flag is assigned.

4.2 Confidence Level

- 4.2.1 Levels of confidence in the positional and geometric accuracy of a BLPU Polygon are assigned by means of a numeric series increasing as confidence decreases, thus the confidence level of 1 is the highest level, see **Figure 1**.
- 4.2.2 Confidence levels 5 and 6 are used temporarily and should be subject to improvement. However it is acknowledged that some features captured as level 6 can never improve, for example, wall mounted advertisements. For information on the options for capturing these features, see [Section 7.17](#).

DEC-BLPU-P

Section 4 – BLPU Polygon Extent Record

Confidence Level Number to apply	Description	
1	Feature exists on the Vector Base Map and a site visit has taken place.	BLPU Polygons should attain this level of confidence.
2	Feature exists on the Vector Base Mapping and the source of the change data is of high-quality.	
3	No feature exists on the Vector Base Mapping and the source of the change data is high-quality.	
4	Feature exists on the Vector Base Mapping however only the building footprint is used.	
5	Polygon created from Aerial Photography, Planning Application Boundaries etc.	BLPU Polygons created with these levels of confidence should be improved to levels 1 to 4 if possible. It is however acknowledged that some BLPU Polygons captured as level 6 can never improve.
6	Wall mounted advertisements etc – the geometric shape of the BLPU Polygon does not relate to the true geometry.	

Figure 1 - Confidence Levels in a BLPU Polygon. Life Cycle – Life (Maintenance)

4.2.3 BLPU Polygons must be validated against the following criteria:

- Reliability of source data.
- Certainty that something has happened or will happen.

4.2.4 **Figure 2** shows an example of how the quality and accuracy of the source information influences the reliability of the BLPU Polygon. Each Contributing Authority should compile their own matrix, based upon the reliability of the data source within their own organisation.

4.2.6 In this example, information from SNN is an excellent indication that something has happened. Usually, this information has an accurate plan and detailed information about the addressing and curtilage or boundary. However, there are some examples of developments which change after SNN is agreed; therefore SNN cannot be given the highest level of confidence as a source of information.

4.2.7 In this example information from a planning application showing a proposed new development is not considered an indication that something is definitely going to happen, only that it might. There is insufficient source information to assign even the lowest of confidence flags at this stage. Therefore it is inappropriate to create a BLPU Polygon which describes any change resulting from a planning application. However, if the plan which accompanies a planning application clearly outlines a BLPU extent as it currently exists in the real world, then it may be used as the basis for a BLPU Polygon.

DEC-BLPU-P

Section 4 – BLPU Polygon Extent Record

Something has or will happen			
	Low	Medium	High
Low	Development Services (planning)* Council Tax*	Customer Services 6	4
Medium	6	Land Charges 5	Building Control SNN 3
High	Land Registry Terrier 5	3	Base Mapping 2

Note: * - Insufficient source information to create a BLPU Polygon.
Figure 2 - Example of a reliability matrix.

4.3 Versioning

- 4.3.1 For details of how polygon versioning is handled, see [Section 4.3.7](#).
- 4.3.2 Guidance for managing examples of change, such as splitting a BLPU into two or more new BLPUs, merging BLPUs into one or more new BLPUs, is consistent with the guidance on managing change to BLPUs in the DEC-NLPG. Therefore, BLPUs are managed as new, modified or historical Records and the associated BLPU Polygon is managed in the same way. If a building within a BLPU Polygon boundary is demolished but the full extent of the BLPU remains unchanged, the BLPU Polygon remains live. For example, if 5 High Street is demolished, the LPI is set as historical and a new LPI is added. The BLPU Polygon therefore remains linked to the UPRN and is not set as historical. Versioning is not needed. The BPLU Polygon represents the BLPU extent which has not changed.
- 4.3.3 It is also possible for a BLPU Polygon to be historical whilst the changed BLPU and LPI Records remain live and for a new BLPU Polygon to be created. For example, if a residential property acquires some additional garden land, thus increasing the curtilage, the BLPU and LPI Records do not change, but the polygon does. This is a classic example of why BLPU Polygons and versioning are important, as they show a change which is not recorded elsewhere in the LLPG.
- 4.3.4 The geometric element of historical versions of BLPU Polygons should be stored if possible.
- 4.3.5 Some of the reasons for changing a BLPU Polygon are:
- Improved intelligence because of a site inspection.
 - Real world change to Vector Base Mapping.
 - Non real world change to Vector Base Mapping.

DEC-BLPU-P

Section 4 – BLPU Polygon Extent Record

4.3.6 The Contributing Authority defines when a new version is created and when just a simple correction is needed. Sub-versioning is also required. For examples of when sub-versioning is required, see **Figure 3**. Sub-versions are intended to be held locally and not transferred using DTF7.3.

4.3.7 The following rules apply:

- Each BLPU Polygon extent Provenance has only one 'live' BLPU Polygon.
- The historical version must have an end date and the current version must have a start date and a created date.
- Each change is monitored by either date and time or sub-version.
- Only the last record in each version is kept as a historical BLPU Polygon.
- As the BLPU Polygon goes through a change only the most current sub-version is kept.
- Versioning is not intended to record corrections which are made as a result of an error.

Event	Polygon 1	(addition of node) Polygon 2	(slight move of node to align with neighbouring property) Polygon 3	(Back Garden was sold off) Polygon 4	(Resurvey due to new build, base mapping line added) Polygon 5	(additional node added for addition of garage on boundary) Polygon 6	(Verge maintenance next to road identified as part of their property) Polygon 7	(Strip of land bought to give access to another Road) Polygon 8
Date of Change	Date and time (1)	Date and time (2)	Date and time (3)	Date and time (4)	Date and time (5)	Date and time (6)	Date and time (7)	Date and time (8)
Date made historical			<i>Date and time (4)</i>				<i>Date and time (8)</i>	
Version	V1	V1	V1	V2	V2	V2	V2	V3
Sub Version	v1	v1.1	v1.2	v2	v2.1	v2.2	v2.3	v3

Figure 3 - Polygon Version life cycle (brackets indicate examples of the type of change).

4.3.8 In this example three Records are retained. These are the latest change of each version. V1 and v2 are held as historical Records and v3 is held as a current Record.

4.3.9 The mechanism for storing historical BLPU Polygons is a transfer issue which is outside the scope of this document.

DEC-BLPU-P

Section 4 – BLPU Polygon Extent Record

4.4 Polygon Unique ID

4.4.1 Each BLPU Polygon should have a unique key. This is because each BLPU can have more than one BLPU Polygon and the unique key enables the BLPU to be associated with the BLPU Polygon without reference to the Provenance or any other Record.

4.5 BLPU Polygon Extent Record Attribute Table

4.5.1 This table shows the attribute changes required if BLPU Polygon extents are adopted by an authority and if that data is transferred using the DTF format. Differences from the table in the current DTF are shown in italics.

BLPU EXTENT RECORD (type 25)				
Attribute	Description	Type	Value	Status
RECORD_IDENTIFIER	Identifies this record as a BLPU extent	I(2)	25	Man
CHANGE_TYPE	Identifies the type of change associated with this record.	T 1	Table S1	Man
PRO_ORDER	Processing order serial number	N 16		Man
UPRN	Unique property reference number.	N 12		Man
UNIQUE_POLY_KEY	<i>Unique Key for the polygon</i>	<i>T14</i>		<i>Man</i>
PROVENANCE_CODE	Provenance of the BLPU	T 1		Man
CONFIDENCE_LEVEL	<i>Levels of confidence in the positional and geometric accuracy of a BLPU Polygon will be assigned by means of a numeric series increasing as confidence decreases.</i>	<i>I 1</i>	<i>See Section 4.2</i>	<i>Man</i>
<i>POLY_VERSION_NUMBER</i>	<i>The version number of the polygon</i>			
START_DATE	Date this record created.	Date	Not later than current date.	Man
END_DATE	Date this record ceased to exist.	Date	Not earlier than start date	Opt
ENTRY_DATE	Date of data entry	Date		Man
LAST_UPDATE_DATE	Date this record was last changed.	Date		Man
SOURCE_DATE	Date of the source of the BLPU extent data	Date		Man
SOURCE_DESCRIPTION	Source and/or relevance of the data representing the BLPU	T 30		Man

Figure 4 - BLPU Extent Record

5. Adding New Polygons

5.1 Background

- 5.1.1 This Section is for Contributing Authorities. It describes best practice and data entry conventions to be followed when creating new BLPU Polygons.
- 5.1.2 Create a polygon for each live BLPU Record. Only create a BLPU Polygon for historical or rejected Records if there is a local business need.
- 5.1.3 Associate each polygon with a BLPU Provenance Record, (see [Section 4.3](#)). Select the Provenance type according to the information which is available. The best practice described in this document is based on the use of the 'Inferred from Physical Features (P)' Provenance because this defines the BLPU Polygon as captured from base mapping rather than as a legal or other boundary. This information source is the most widely available to Authority Address Custodians.
- 5.1.4 The exception to this is the best practice described for Street BLPU Polygons. In this case, the 'Inferred from Use' Provenance is used because the purpose of Street BLPUs is to record incidents which relate to a Street and which cannot be attributed to an individual property. Therefore, the extent of a Street BLPU Polygon is defined by the properties which are addressed to that Street. The Street BLPU Polygon is not a physical representation of the Street.
- 5.1.5 In order to achieve a high quality usable LLPG with BLPU Polygons the GPWG recommends that, whilst the ideal is to attain 100% coverage, BLPU Polygons for BLPUs with a primary classification of Residential, Commercial and Dual Use should be given first priority.

5.2 Metadata

- 5.2.1 Include the following information in the gazetteer metadata about the BLPU Polygons captured:
- Scope of polygons captured, for example a defined set of BLPUs.
 - Scale of source data, for example 1:1250.
 - Source of data, for example basemap, Aerial Photography.
 - Date of capture.
 - Organisation responsible for maintenance of the data.
- 5.2.1 It is essential to record metadata for the user to establish the fitness of BLPU Polygons for a wide range of purposes, for example:
- Local Land and Property Gazetteer.
 - Authority business purposes.

5.3 BLPU Extent Provenances

5.3.1 A BLPU extent Provenance is the basis for describing the BLPU Polygon. Therefore the inclusion of a Provenance Record within an LLPG is conditional on the presence of a BLPU Polygon extent. For details of valid BLPU extent Provenance types, see **Figure 5**.

Provenance Code	BS7666 Definitions	Examples
P	Inferred from Physical Features	Imagery or geo-referenced product
O	Inferred from Occupancy	Council Tax, Electoral Registration, Housing, Business Rates.
U	Inferred from Use	
T	Inferred from Registered Title	Land Registry
L	Unregistered land	LA asset register
F	Formal tenancy agreement	LA asset register
R	Rental agreement	LA asset register

Figure 5 – Provenance Codes

5.4 Representative Point Code

5.4.1 The position of BLPU coordinates is important for capturing and linking BLPU Polygons to UPRNs. Only capture BLPU Polygons for those Records which have an RPC value of 1 or 2. Add a BLPU Polygon for a Record when the RPC value is improved to 1 or 2. For information on the definitions of RPC values, see current version of the DEC-NLPG. For information on how to improve the RPC values in the LLPG, see Appendix I of the DEC-NLPG.

5.5 Data Attributes

5.5.1 The polygon inherits the attribution of the BLPU, apart from some key attributes which link the BLPU Polygon to the BLPU. Therefore most of the attributes listed in this section are the unique data required for the BLPU Polygon. This list is of the minimum required attributes, but add additional local attribution if required. The LPI associated with the BLPU Polygon is the one with the highest LPI logical status – where 1 is high.

- UPRN (from BLPU – derive automatically, do not replicate).
- Provenance (from Provenance – derive automatically, do not replicate).
- Address (from BLPU/LPI – derive automatically, do not replicate).
- Logical status (from BLPU – derive automatically, do not replicate).
- Start Date.
- End Date.
- Entry Date.
- Date of last update.

- Confidence Level. *
- Last changed by.
- Unique Polygon ID. *
- Polygon Version. *

* - Attributes additional to those currently specified by NLPG DTF7.3 and 7.4.

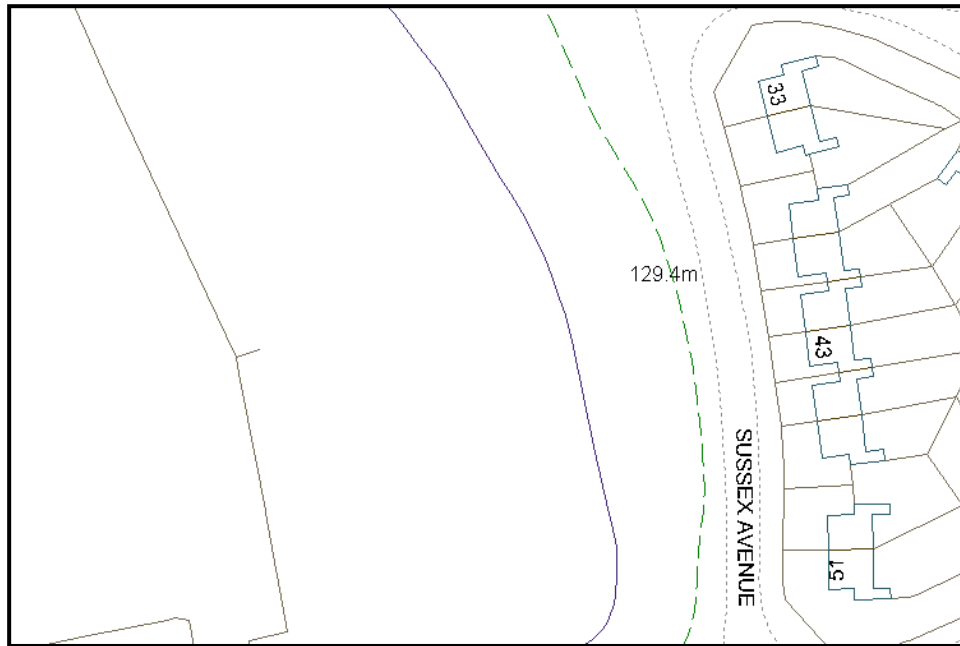
5.6 Data Quality – Source, Scale and Accuracy

- 5.6.1 Source: Construct property extents that follow Vector Base Mapping features (or base mapping BLPU Polygons) by copying or replicating (that is, not freehand tracing) base mapping linework. Ensure that the geometry which defines the BLPU Polygon is identical to the base mapping geometry and is therefore at the same level of precision. Copy source base mapping polygons and merge if required.
- 5.6.2 Scale: The scale of any source documentation used for the capture of the BLPU Polygon or any change, particularly if the source material is paper. If the capture approach is to copy or replicate the base mapping, use source mapping at a scale of not less than 1:500. If Aerial Photography or other media is used, then use the best resolution possible.
- 5.6.3 Accuracy: Information regarding the status of positional accuracy of the base mapping is required. As with all mapping layers there are inevitably some inconsistencies with accuracy and precision to consider. It is possible that there are also on-going programmes of improvement which impact on any datasets derived from base mapping. Include details of source mapping quality in the metadata Record. For further information on the metadata Record see [Section 5.2](#).

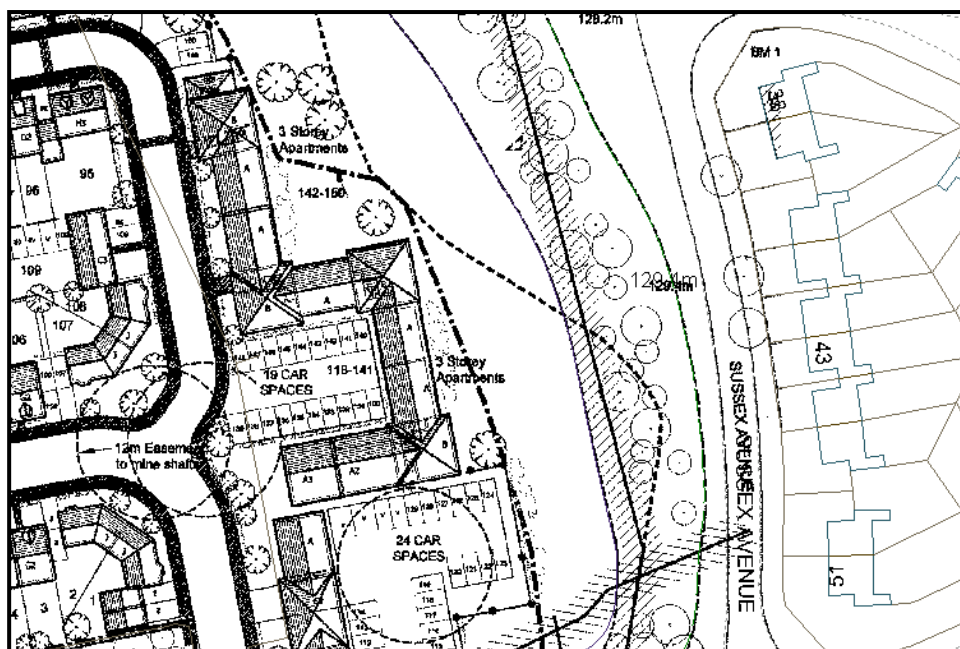
5.7 Confidence Flag

- 5.7.1 The Confidence Flag demonstrates the data quality. The levels range from 1 to 6 with the low numbers indicating a high level of confidence. Levels 1 and 2 are described as fit for purpose. Level 2 is regarded as normally acceptable. Level 1 indicates that possible known boundary conflicts or problems are resolved, typically through on-site inspection.
- 5.7.2 For an example of Confidence Level 3, (no feature exists on the Vector Base Mapping and the source of the change data is high quality), see **Figures 6, 7, 8 and 9**. This is an example of the base mapping lacking up to date information for a new housing development. The developer's layout plan is used to construct BLPU extents for the provisional BLPUs and to place the BLPU Points.

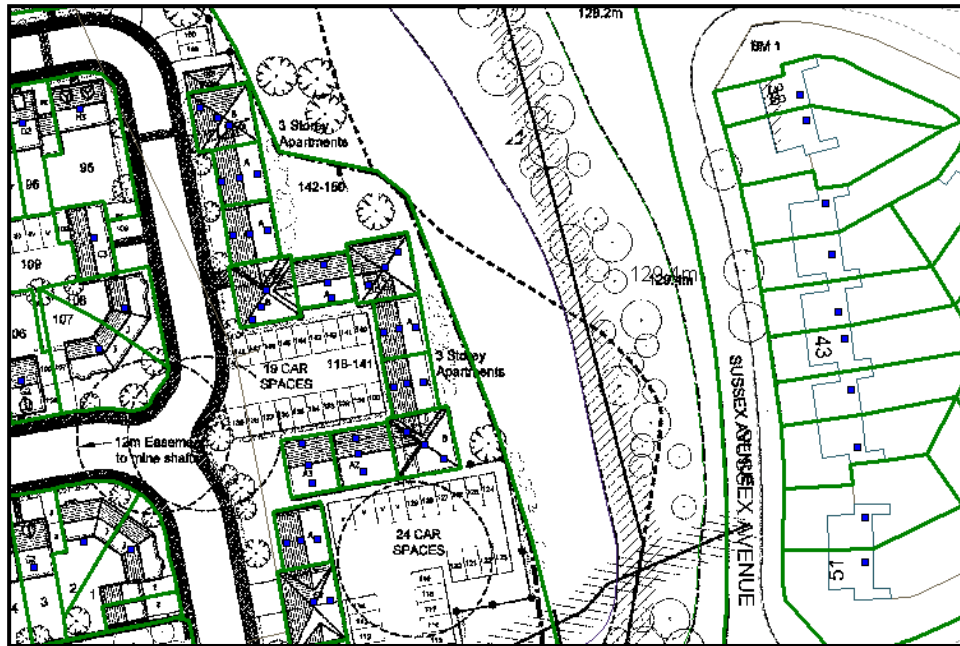
Section 5 - Adding New Polygons



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Figure 6 - Basemap without up to date information.



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Figure 7 - Developer's plan laid over basemap.



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Figure 8 - BLPUs drawn over developer's plan.



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Figure 9 - BLPUs without developer's plan.

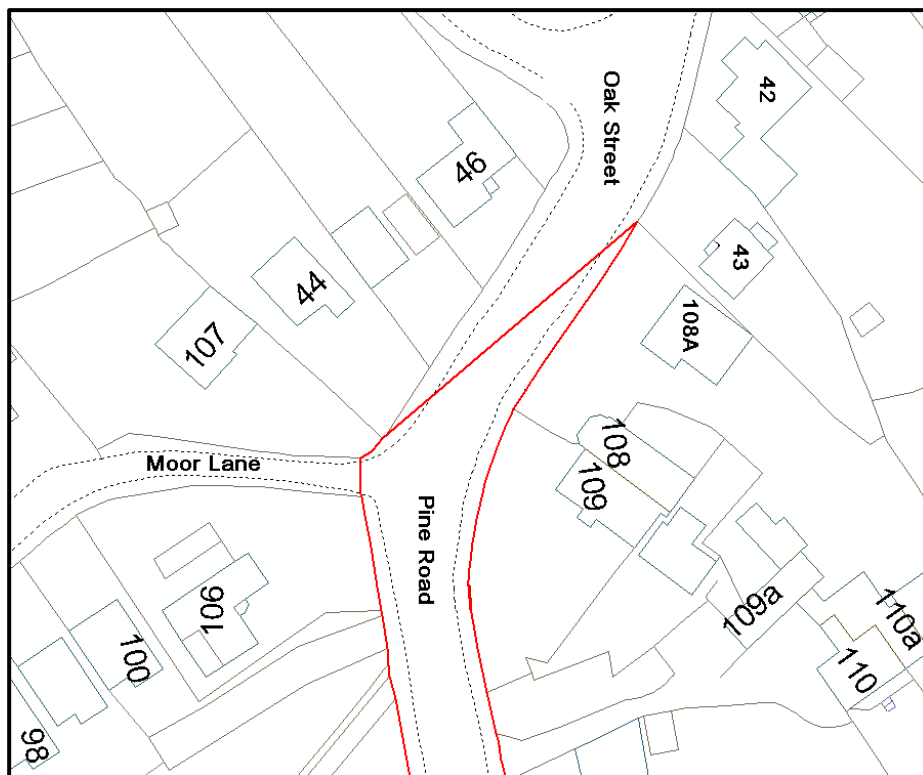
5.8 Best Practice

- 5.8.1 This section describes some general principles to apply when creating BLPUs. For a detailed set of rules with illustrated examples, see [Section 7](#).
- 5.8.2 Adjacency: Ensure adjacent BLPUs share coincident boundaries to ensure no geometric errors, for example slivers, overshoots, overlaps and cross-overs. If there are legitimate different levels of BLPUs, for example Parent/Child Records, then BLPUs can overlap.

- 5.8.3 Objects without a Postal Address (OWPAs): If a feature is not represented on the base mapping or shown on other reference sources, for example milestones and advertisement hoardings, or if a feature has an insignificant footprint, do not capture a polygon because the BLPU Point representation is sufficient. For further information on capturing polygons for OWPAs, see [Section 7.17](#).

5.9 Definition of boundary between Street, land and property

- 5.9.1 Include the footway as part of a Street BLPU Polygon. If there is no footway, include any grass verges immediately adjacent to the carriageway in the Street BLPU Polygon.
- 5.9.2 Use the start and end Street coordinates of the Level 1 NSG Record as a guide to the extent of the Street BLPU Polygon. However, these coordinates do not necessarily constrain the Street BLPU Polygon.
- 5.9.3 Use BLPU addresses to guide the Street BLPU Polygon so that an LPI referenced to a type 1 or 2 Street is adjacent to the BLPU Polygon for that Street. See **Figure 10**.



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Figure 10 - Street BLPU based on property access.

- 5.9.4 In **Figure 10**, the Street BLPU Polygon is defined by the position of its linked properties. Whilst not typical, this type of historical addressing does exist. Rules are required to cater for this situation and to keep an extent relationship between the property BLPU and Street BLPU Polygons.

5.10 Base Mapping Inferred Lines

- 5.10.1 When creating a new BLPU Polygon, select relevant base mapping data based on feature codes. If possible the BLPU Polygon extents should be mathematically or geometrically identical to the underlying base mapping line work.
- 5.10.2 If it is not possible to capture all required BLPU Polygons directly from the features which exist within the base mapping use inferred base mapping lines. Some of the base mapping lines themselves may be inferred by the data supplier, and these are identified through the attributes in the underlying database.
- 5.10.3 It is important that users understand if inferred lines have been used and under what circumstances. Inferred lines can be extended to close a BLPU Polygon. For examples of the use of inferred lines, see [Section 7.1.1](#). If boundaries are created with inferred lines, or if inferred lines are extended to close a BLPU Polygon, set the Confidence Flag to 3.

5.11 Parent/Child Relationships

- 5.11.1 Parent/Child relationships are defined in BS 7666:2006 and the DEC-NLPG. Ensure that the Parent BLPU Polygon represents at least the sum of the extents of the associated Child BLPU Polygons. This means that a Child BLPU Polygon must not extend beyond the boundary of its Parent BLPU Polygon.
- 5.11.2 Use one of the following methods to manage related parcels of land, for example gardens around blocks of flats or loading and delivery areas around non-estate industrial properties:
- Construct an inferred BLPU Polygon that covers the whole site including the footprint of buildings. See **Figure 11**.
 - Construct a BLPU Polygon that excludes the building footprint. See **Figure 12**.
- 5.11.3 Either method is acceptable but the approach in **Figure 11** is preferred. The choice of method depends upon the source material available, the business needs of the authority and other PSMA bodies. Generally, if the area has a name, for example, Brook Street Business Centre, and therefore if a PAON Record exists then **Figure 11** is preferred. If there is no named PAON, and the properties are addressed directly to the Street, for example Brook House, Brook Street, then the approach in **Figure 11** is preferred, but the approach in **Figure 12** is also acceptable.

Section 5 - Adding New Polygons



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Figure 11 - Parent BLPU extent covers Child BLPU extents.



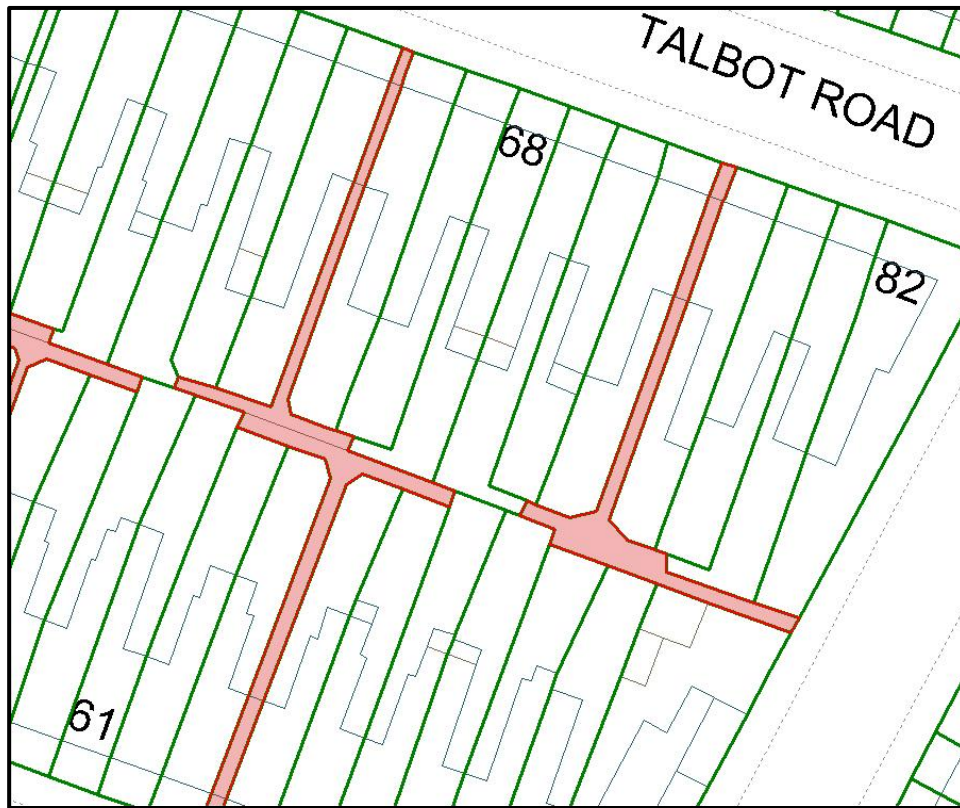
© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2009
Figure 12 - Parent BLPU with Child BLPU extents 'cut out'.

5.12 Streets

- 5.12.1 Highway legal extents of responsibility as defined in a NSG Type 61 Record (Street works interest Record) are not always the same as a Street BLPU Polygon for LLPG purposes.
- 5.12.2 For the purposes of this document, if an access-way to the rear of a property runs between two properties and is simply a shared track between two properties to a secondary entrance, for example a garden gate, then this is considered to be a BLPU. See **Figure 13**.

Section 5 - Adding New Polygons

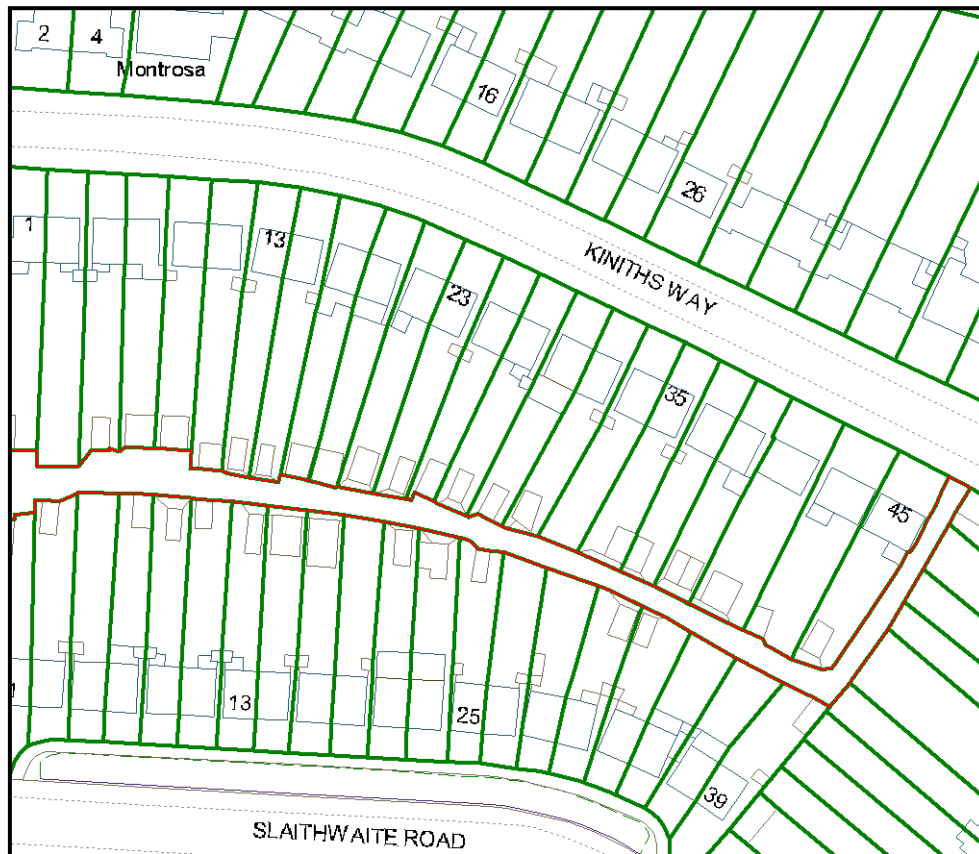
- 5.12.3 If an alleyway which runs behind a series of houses and is accessed from two ends is considered to be a Street, then a Street BLPU Polygon is created.



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Figure 13 - Alleyway BLPU extents.

- 5.12.4 In **Figure 13** if the alleyways are recorded as BLPU with PAONs such as Alleyway rear of Talbot Road, the BLPU Polygons are captured.

Section 5 - Adding New Polygons



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Figure 14 - Street BLPU Polygon for an alleyway.

5.12.5 In **Figure 14** an alleyway is recorded as a Street in the LSG, and a Street BLPU Polygon is created for this Record.

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Section 6 - Maintaining Existing Polygons

6. Maintaining Existing Polygons

6.1 Background

6.1.1 This section provides guidance for Contributing Authorities when maintaining existing BLPU Polygons.

6.2 Versioning

6.2.1 If there is a change in the quality of mapping information available, change the version number of the BLPU Polygon. For example, if a polygon based on a Building Control layout plan is changed to match newly constructed features drawn on the base mapping. Each change in the boundary results in the version number increasing by one whole number (see [Section 4.3](#)). Therefore the current version is the highest number. Each version has a date of change.

6.3 Effect of change on adjoining BLPU Polygons

6.3.1 If a new property is added to the LLPG, assign the best confidence level to the BLPU Polygon at its creation. Lower the confidence level of any adjoining property with a coincident boundary until it is reconfirmed by the Authority Address Custodian. Confidence levels are dependent on the type of change made to a BLPU Polygon.

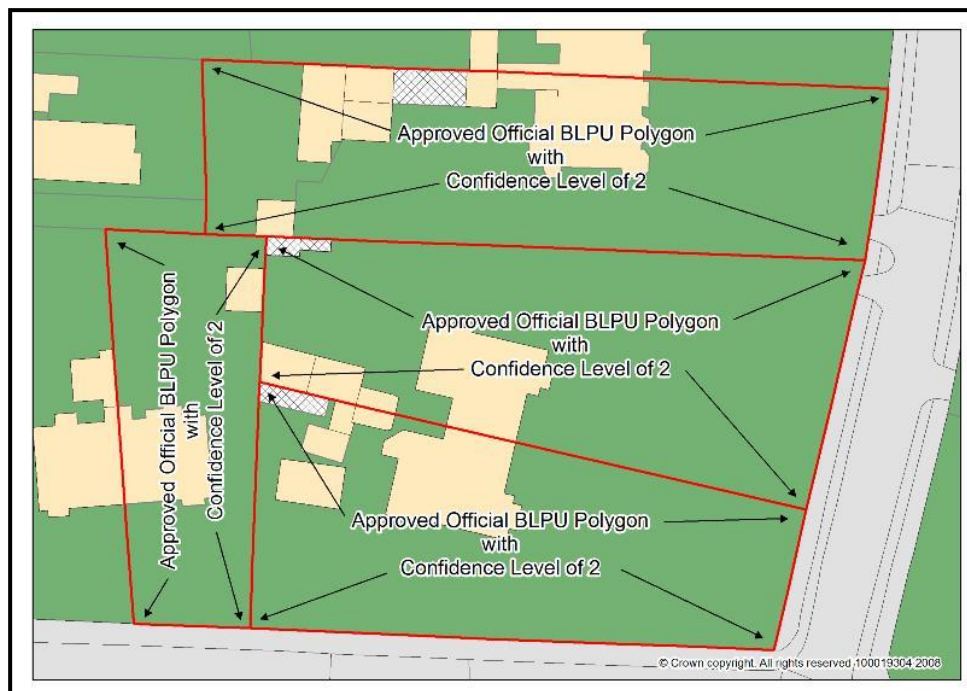


Figure 15 - Four BLPUs with a confidence level of 2.

DEC-BLPU-P

Section 6 - Maintaining Existing Polygons

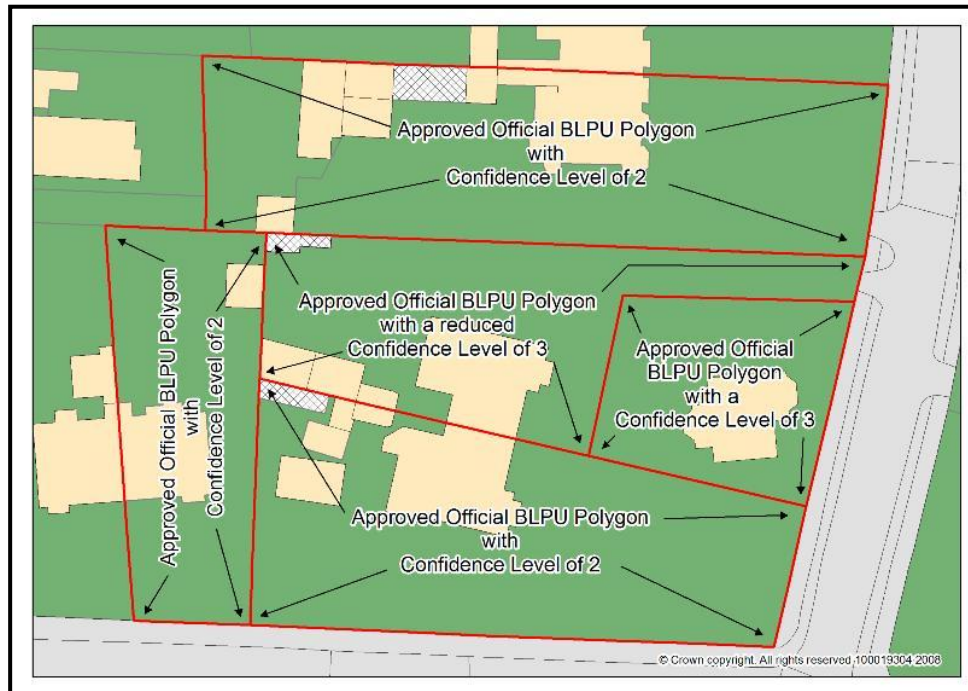


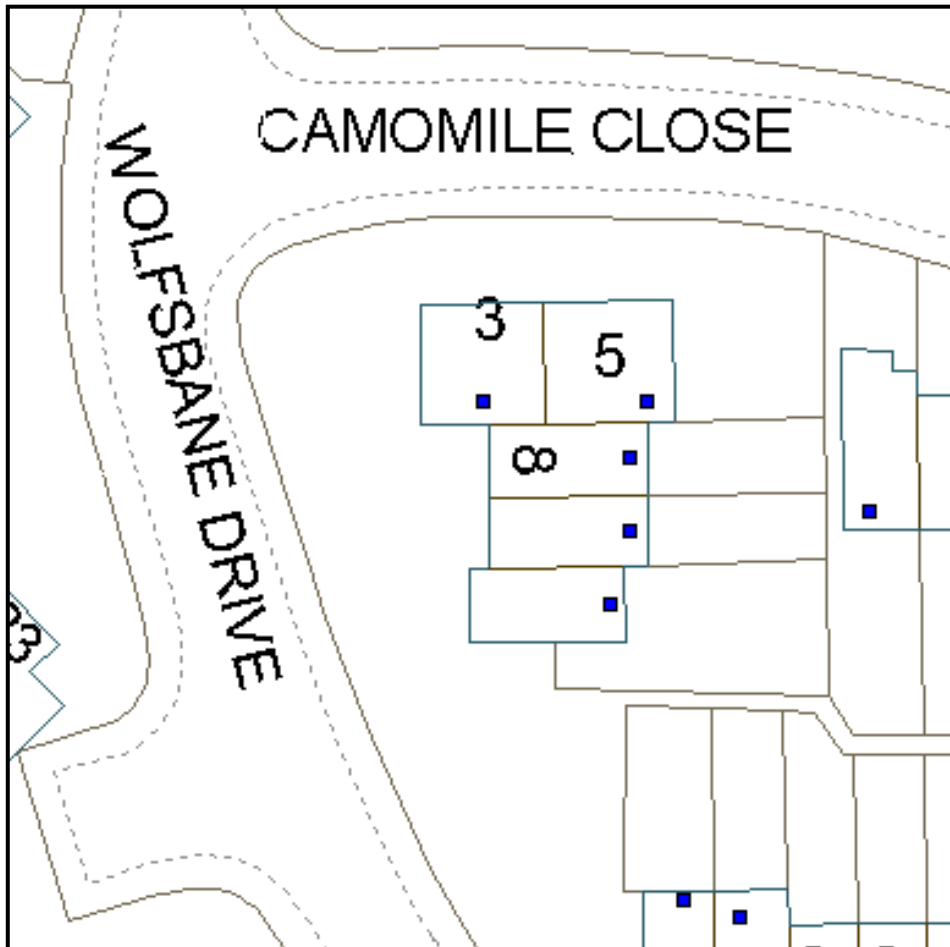
Figure 16 - Effect of change on BLPU Polygons.

- 6.3.2 In **Figure 15** and **Figure 16** a change occurs whereby a new BLPU Polygon is created with a confidence level of 3 within the boundary of one of the original four. The remainder of the original BLPU Polygon is amended, or a new BLPU Polygon is created, with a confidence level of 3 to match that of the new BLPU Polygon.

7. Examples and Diagrams

7.1 Inferred Lines.

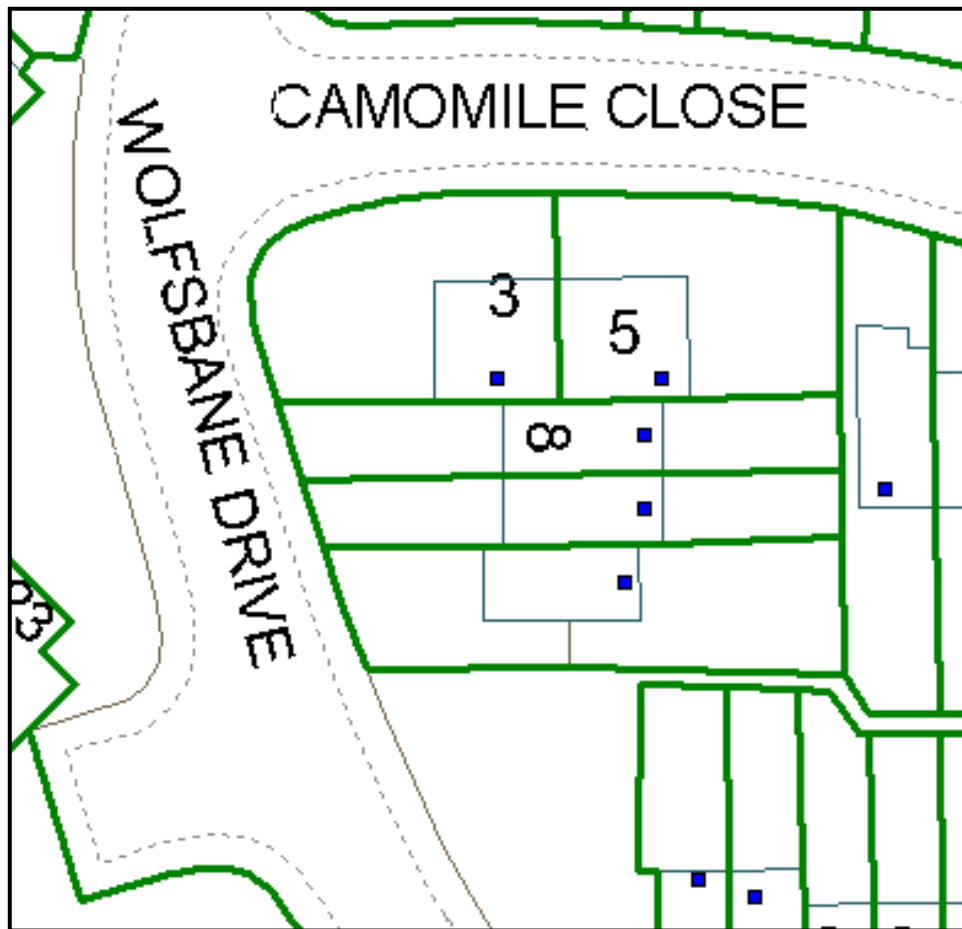
7.1.1 **Figure 17** shows base mapping and **Figure 18** shows the use of inferred lines with the underlying base mapping to create a BLPU Polygon. The BLPU Polygon boundary cannot be completed using existing boundaries alone. In this example, generate additional linework and mark the resulting BLPU Polygons as inferred. There is no line work to distinguish property front garden boundaries therefore inferred lines are used.



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Figure 17 – Base mapping requiring inferred lines.

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Section 7 - Examples and Diagrams

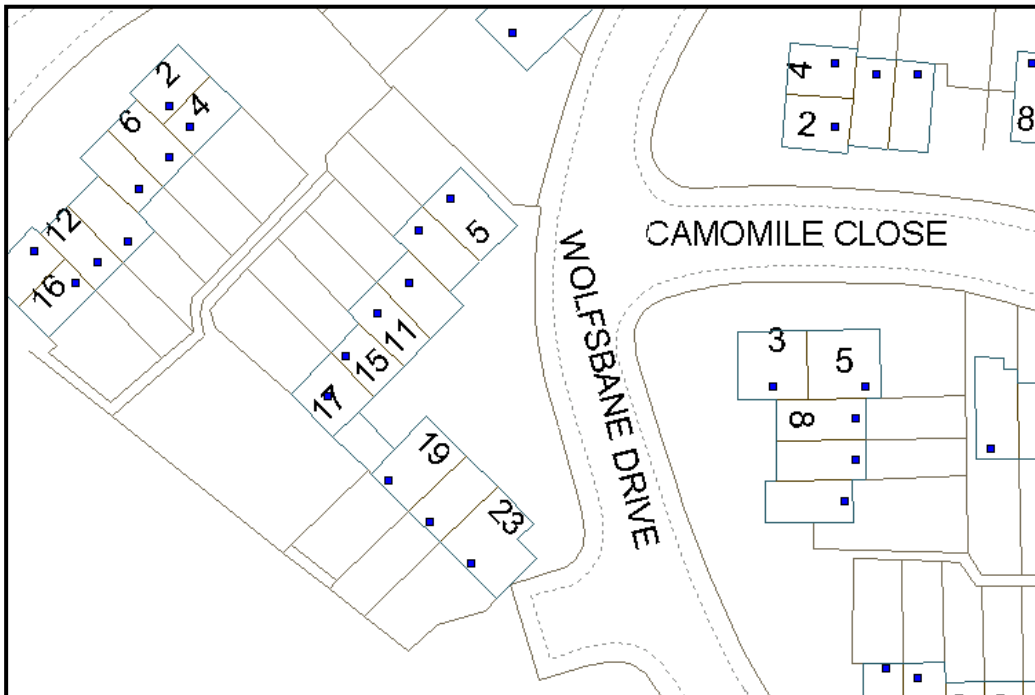


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Figure 18 - BLPU Polygon extents using inferred lines.

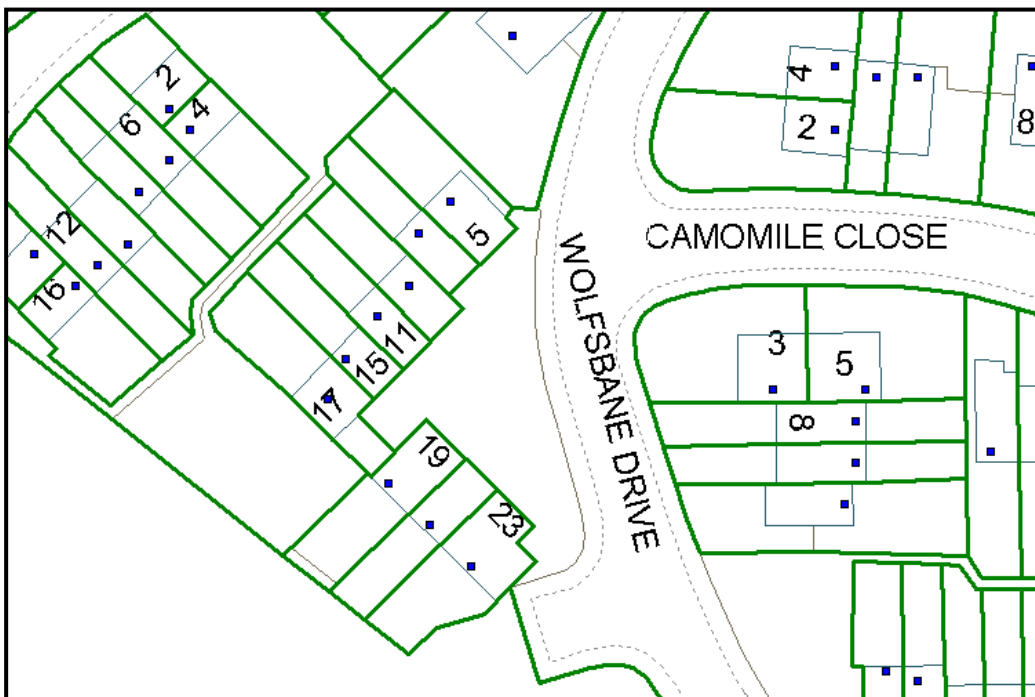
- 7.1.2 If the full extent of a BLPU cannot be reliably inferred from the mapping detail available, create a boundary encompassing the minimum curtilage capable of being accurately inferred, and flag the resulting BLPUs with an appropriate Confidence Flag.
- 7.1.3 **Figure 19** shows base mapping and **Figure 20** shows some inferred lines are used in BLPU Polygon creation.
- 7.1.4 **Figure 21** shows base mapping with inferred lines shown in pink and **Figure 22** shows inferred black bold lines which are not used in BLPU Polygon creation.

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Section 7 - Examples and Diagrams



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Figure 19 – Base mapping cannot be relied upon for inferred lines.



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Figure 20 - BLPU Polygons with inferred lines.

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Section 7 - Examples and Diagrams



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Figure 21 - Inferred lines shown in pink.

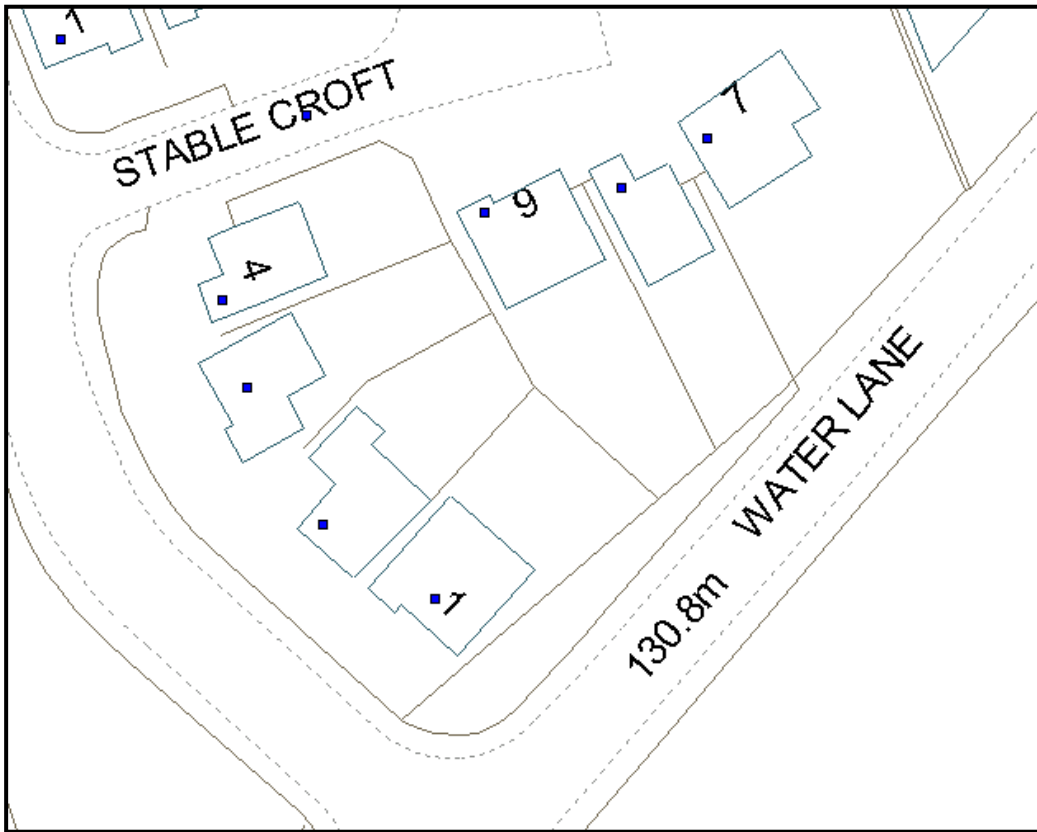


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Figure 22 - BLPU Polygon extents based on inferred lines if appropriate.

7.1.5 In **Figure 23** and **Figure 24** the extents created include front gardens to the four houses served by the Street they are accessed from. Create a BLPU Polygon using inferred line work for the buildings that have no distinguishable front garden boundary on the base mapping.

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Section 7 - Examples and Diagrams



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Figure 23 - Base mapping requiring inferred lines.



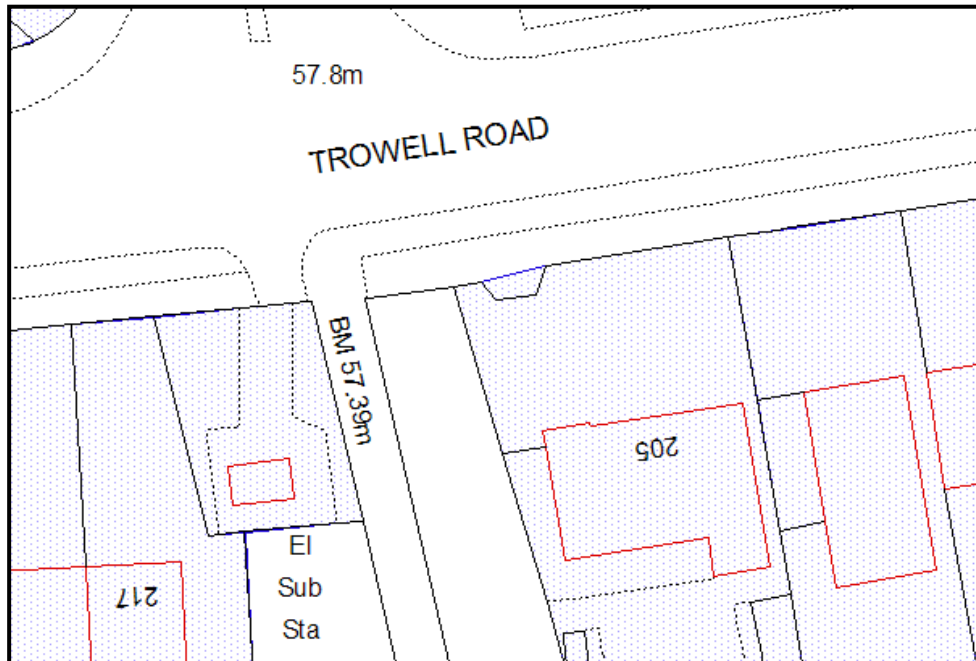
© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2009
Figure 24 - Front Property inferred lines.

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Section 7 - Examples and Diagrams

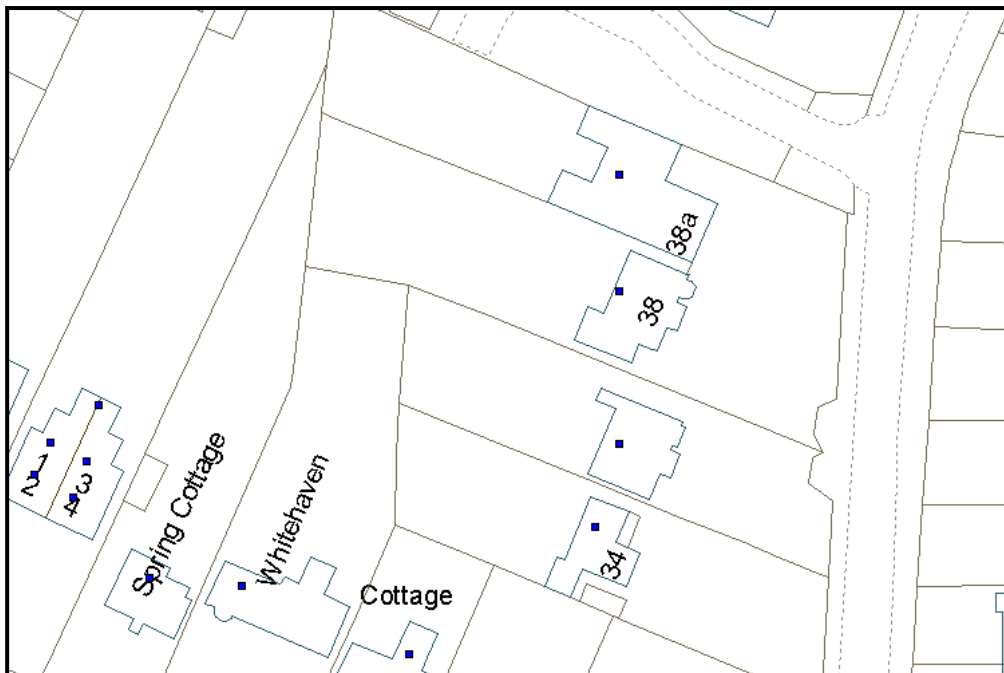
7.2 Access Splays

7.2.1 The treatment of driveway entrances and access splays is vital to ensure consistency between property and Street BLPU Polygons. Ensure BLPU Polygons include all access splays within the BLPU extent.



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Figure 25 - Access Splays example - See 205 Trowell Road.

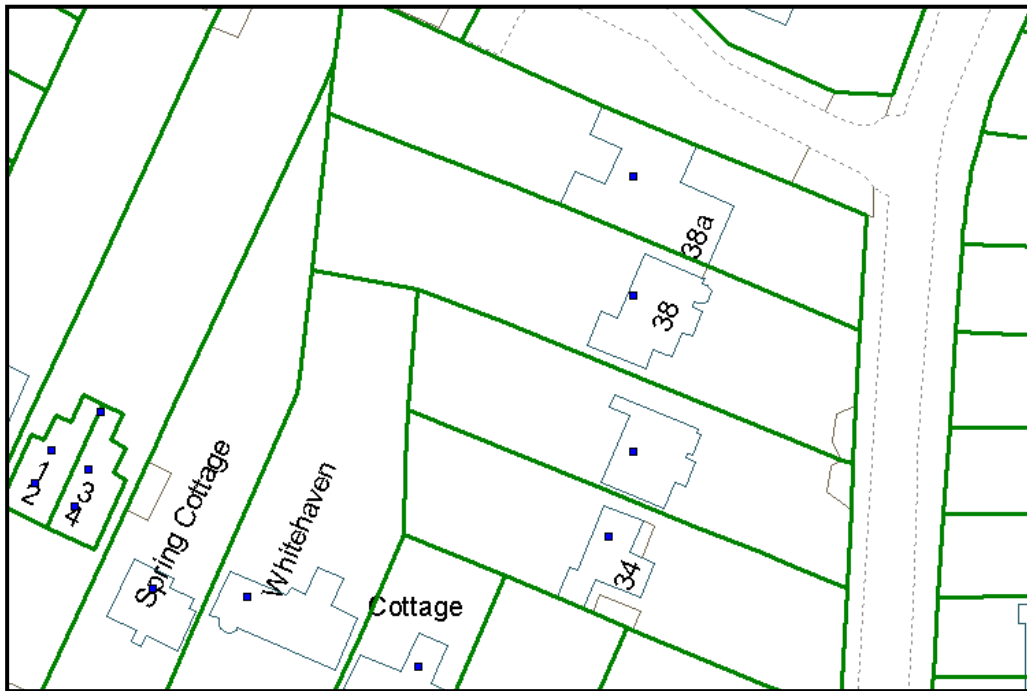
7.2.2 If a splay is shared between properties then extend the BLPU Polygon extent boundary line to split the splay in half.



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Figure 26 - Shared access splays.

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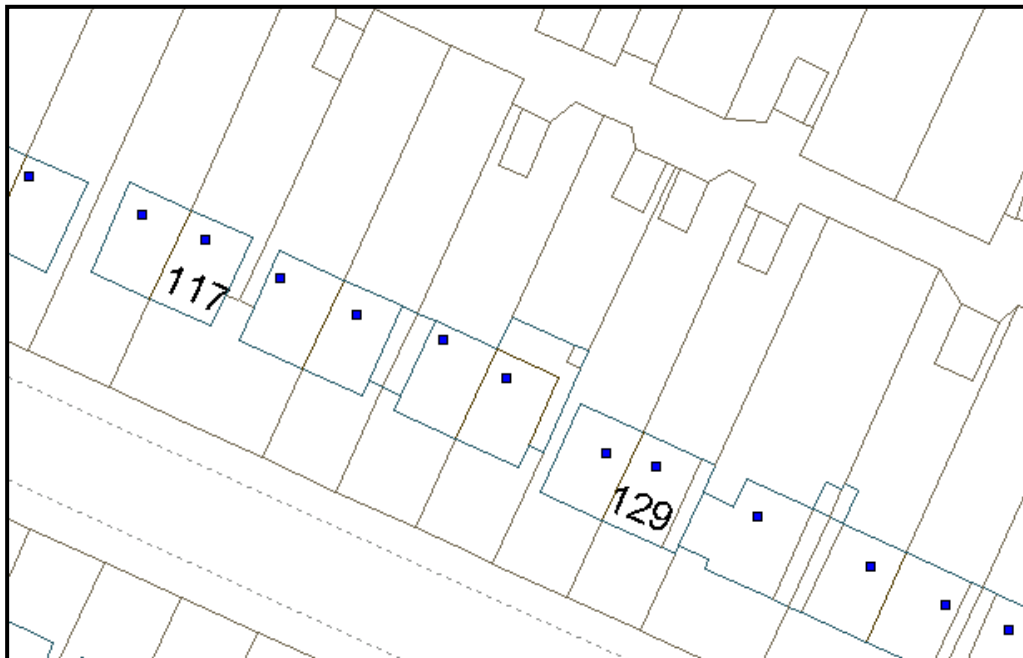
Section 7 - Examples and Diagrams



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Figure 27 - Shared access splays split in half.

- 7.2.3 In **Figure 27**, the boundary line between the two properties is extended (that is, inferred) to join the inferred lines which form the boundary between the property BLPUs and the Street BLPU Polygon boundary.
- 7.2.4 In **Figure 28** and **Figure 29** rear access splays are inferred and split between the BLPU Polygon extents.



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Figure 28 - Base mapping rear property access splays.

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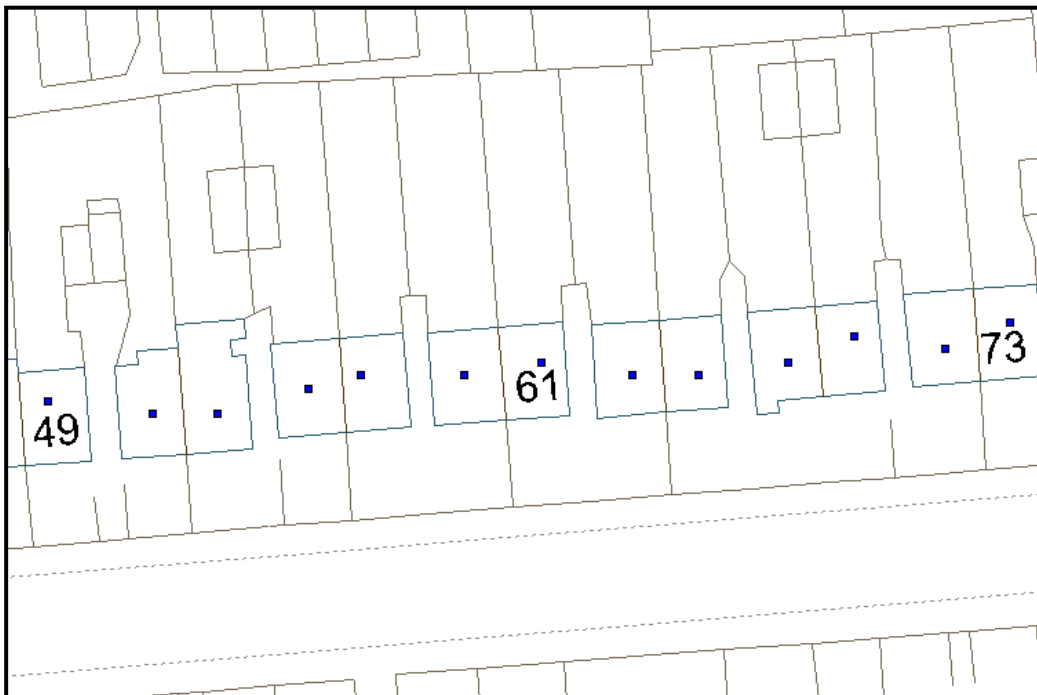
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Figure 29 - BLPU Polygon extents with inferred lines to capture rear property access splays.

7.3 Shared Access-Ways

7.3.1 In **Figure 30** and **Figure 31**, there is an entrance driveway shared between two properties. Capture the BLPU Polygon extent boundary so the shared area is split into two halves.



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Figure 30 - Shared driveway.

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Section 7 - Examples and Diagrams



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Figure 31 - Shared driveway with BLPU Polygons.

7.3.2 If the primary use of BLPU Polygons in a Contributing Authority is to support services which require shared driveways to be included in all BLPU Polygons which abut or adjoin that driveway, then it is acceptable for the driveway to be included in more than one BLPU Polygon. In this case, use a provenance code of U inferred from use.

7.4 Rear Access-Ways

7.4.1 Exclude access-ways to the rear and sides of property boundaries from the BLPU Polygon. Include these access-ways in the Street BLPU Polygon.

7.4.2 An exception to this rule is if the rear access is not at the end of the gardens, but through the gardens close to the rear of the dwellings. Deal with this in one of the following ways:

- If the primary use of BLPU Polygons in a Contributing Authority is to support services which have a requirement for apparent use of a BLPU, then draw a single BLPU Polygon which includes the extent of the access-way and use a provenance code of U inferred from use. For an example see **Figure 32** and **Figure 33**.
- If the primary use of BLPU Polygons in a Contributing Authority is to provide a complete polygon layer with a consistent provenance code, then create a multi-part polygon excluding the extent of the access-way. For an example see **Figure 34** and **Figure 35**.

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Section 7 - Examples and Diagrams



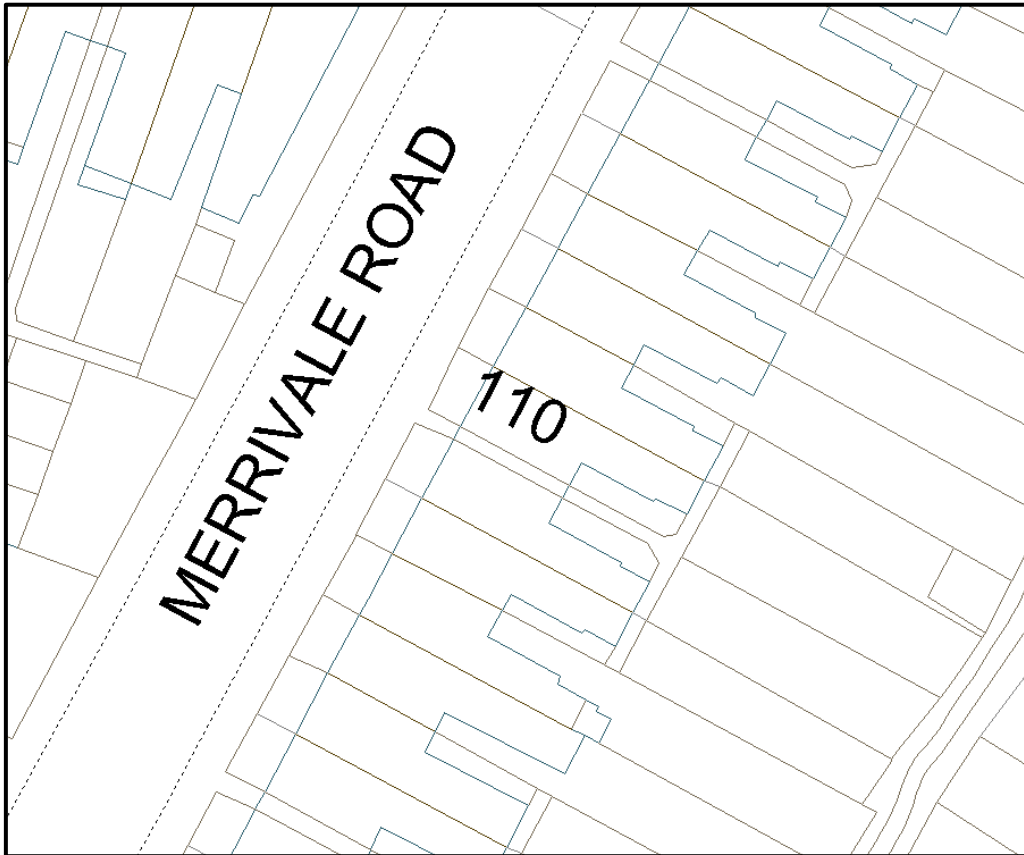
© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2009
Figure 32 - Rear access through property gardens.



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Figure 33 - Single BLPU Polygons where rear access goes through gardens.

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Section 7 - Examples and Diagrams



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Figure 34 - Rear access-ways base mapping.



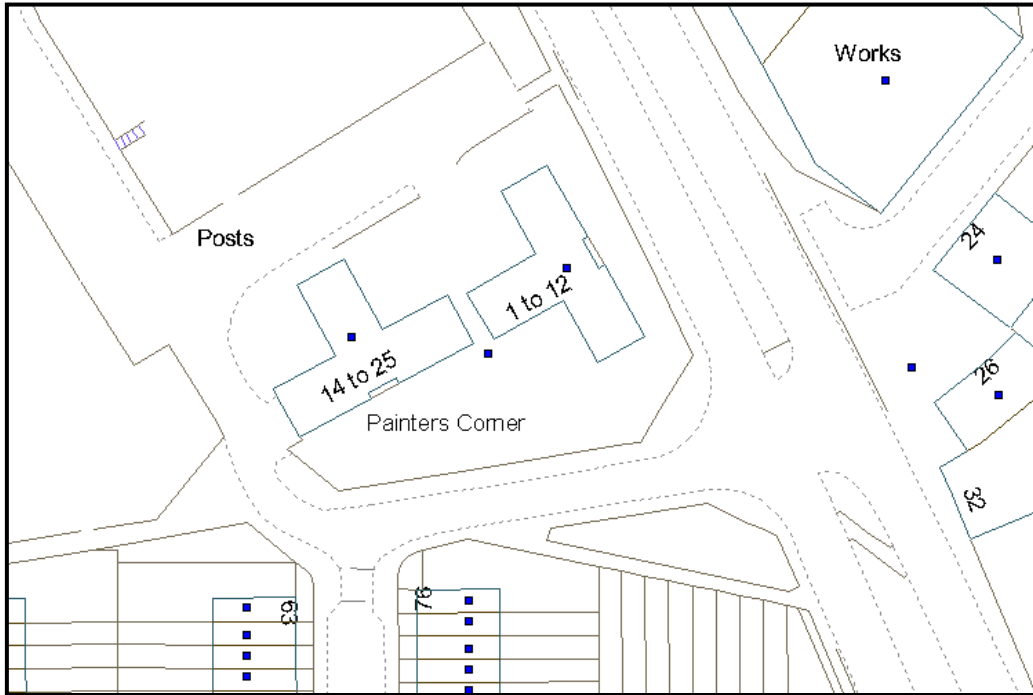
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Figure 35 - Multi part BLPU Polygon where rear access goes through gardens.

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Section 7 - Examples and Diagrams

7.5 Blocks of Properties

7.5.1 If a block of properties has a name, capture the BLPU Polygon for the block that is the Parent Record, to show the curtilage of the block. Capture the BLPU Polygons for the Child Records to show the footprint of the block. See **Figures 36** and **Figure 37**.



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Figure 36 - Named block of properties.

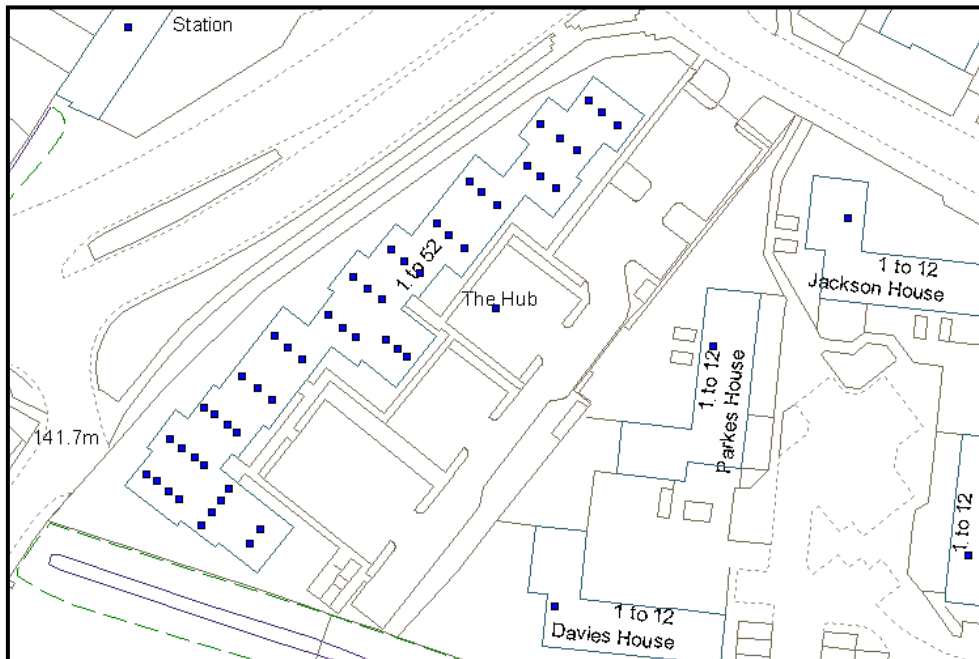


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Figure 37 - Named block of properties with BLPU Polygons.

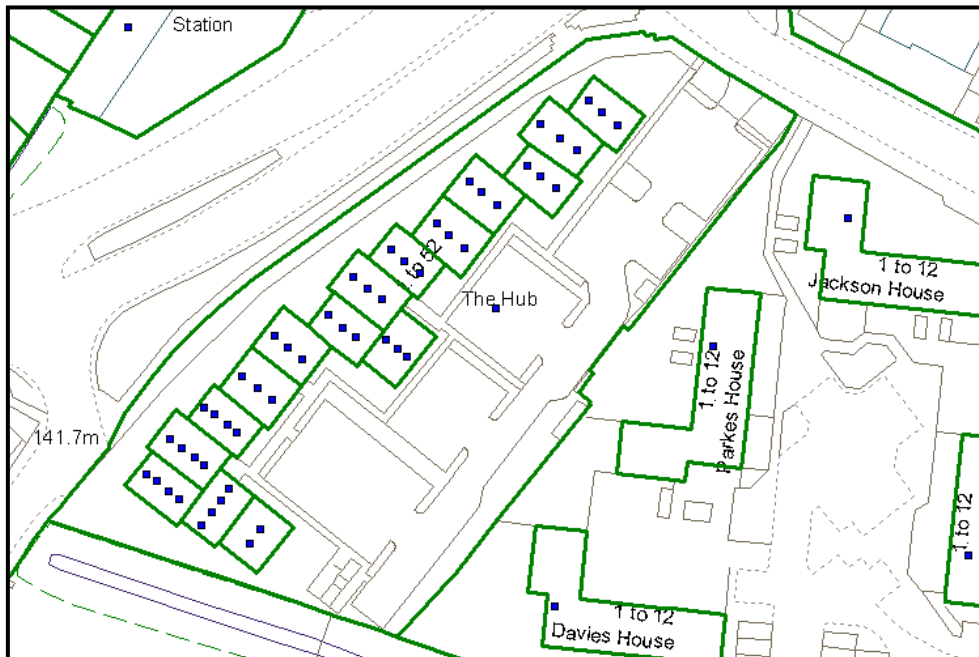
DEC-BLPU-P

Section 7 - Examples and Diagrams

- 7.5.2 If a block of properties can be subdivided using reliable information from the base map, developer plans, local knowledge or a site visit, capture each BLPU Polygon against the respective part of the building. For an example, see **Figure 38** and **Figure 39**.
- 7.5.3 If there is only one block within the curtilage and it is not clear how the site is subdivided, then capture the BLPU Polygon for the block and the Child Records using the curtilage of the site.



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Figure 38 - Base mapping data with BLPU Points.



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Figure 39 - With BLPU Polygon extents shown.

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Section 7 - Examples and Diagrams

7.6 Overlapping BLPU Extents

7.6.1 A BLPU Polygon should not overlap an adjacent BLPU Polygon, (see [Section 5.8.2](#)). However, BLPU Polygons may overlap if one or more of the following situations exist:

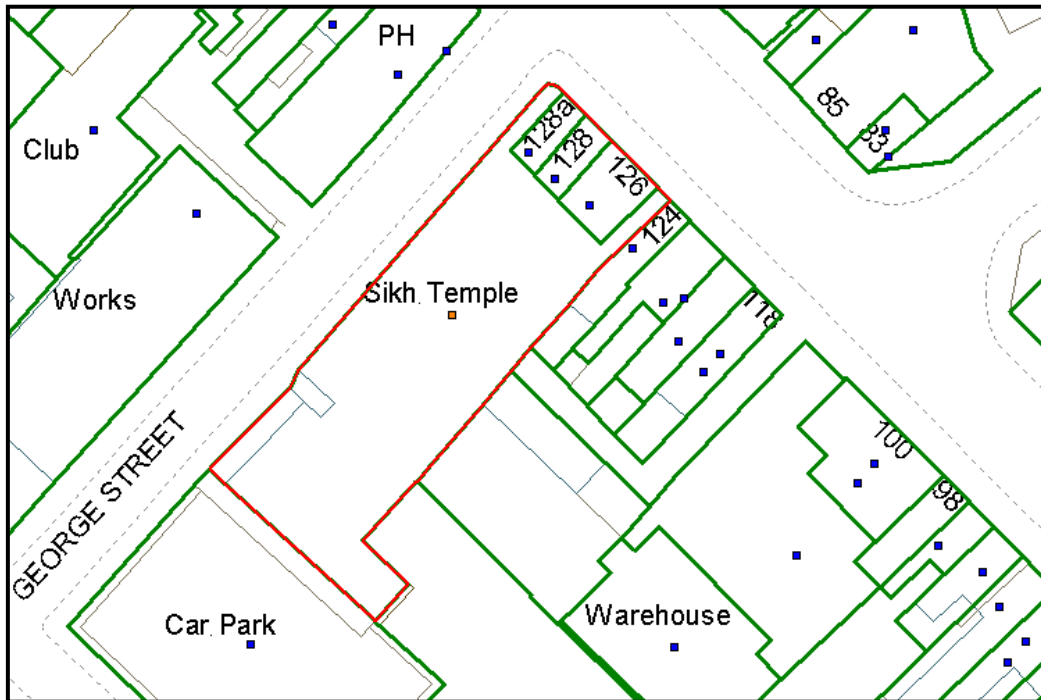
- Blocks of flats.
- Multi-level commercial, retail or residential premises.
- Split level premises.
- Objects lying above or below other features, for example, canals, highways, railways, intersecting linear features.

7.6.2 For the rules about Parent and Child relationships, see [Section 5.11](#).

7.6.3 In **Figure 40** and **Figure 41**, a building has premises on two levels. The temple is a two storey building with an entrance at the corner of the building. Three shops are on the ground floor under part of the temple. The shop BLPU Polygon follows the building outline in the base mapping. The first floor of the temple extends over the shops. Therefore, the BLPU Polygon for the temple overlaps the BLPU Polygons for the shops.



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Figure 40 – Example of split level premises.



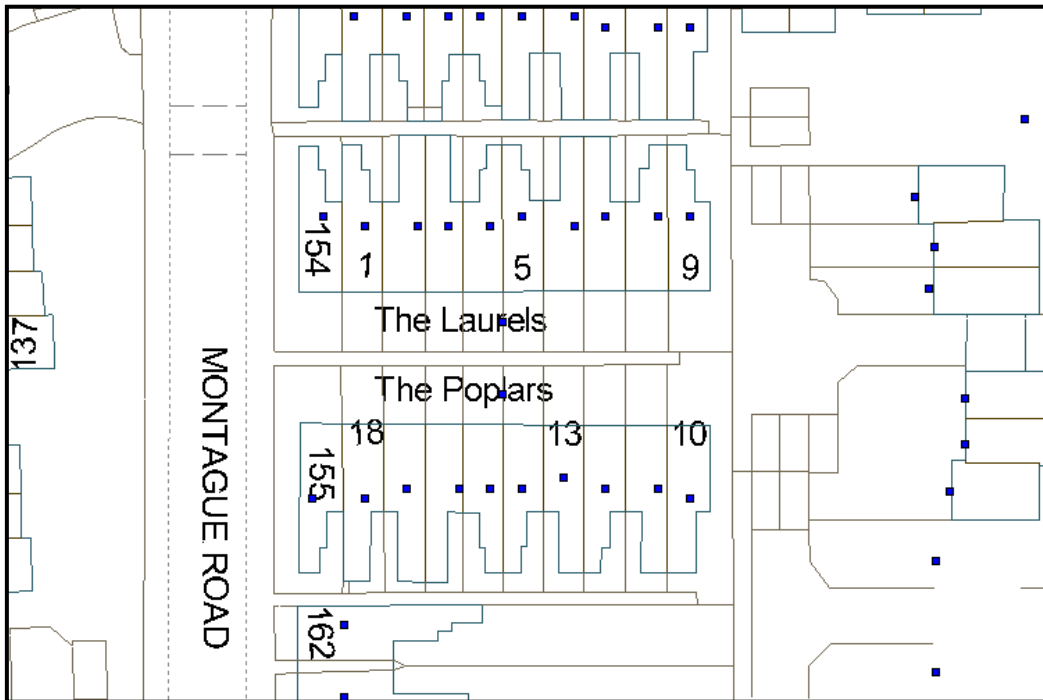
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 Figure 41 - Acceptable use of overlapping BLPU Polygons.

7.7 Named Groups of Properties

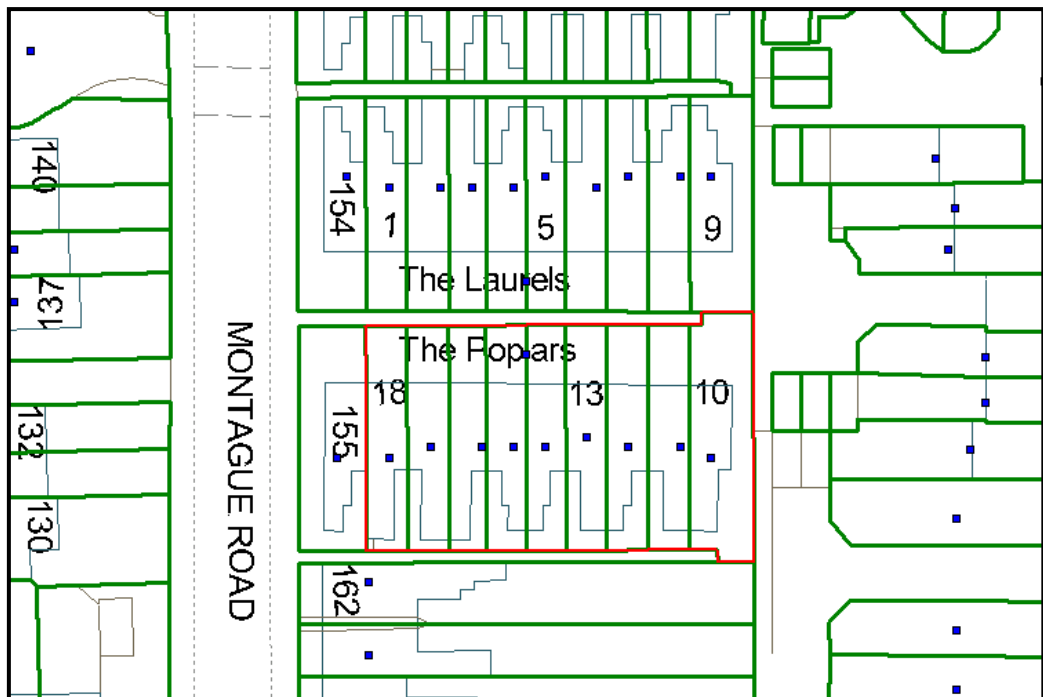
- 7.7.1 If properties share the same PAO text, but have different numbers, these Records are in the LLPG in accordance with BS 7666-2: 2006 as Parent and Child BLPU Records. Draw a separate BLPU Polygon for the Parent Record and the Child Record in all cases.
- 7.7.2 For an example of a group of properties where the BLPU Polygon for the Parent Record does not occupy any more land than the sum of the BLPU Polygons for the Child Records, see **Figure 42** and **Figure 43**.
- 7.7.3 For an example of a group of properties where the BLPU Polygon for the Parent Record occupies more land than the sum of the BLPU Polygons for the Child Records and the full extent of the Parent Record is known, see **Figure 44** and **Figure 45**.

DEC-BLPU-P

Section 7 - Examples and Diagrams



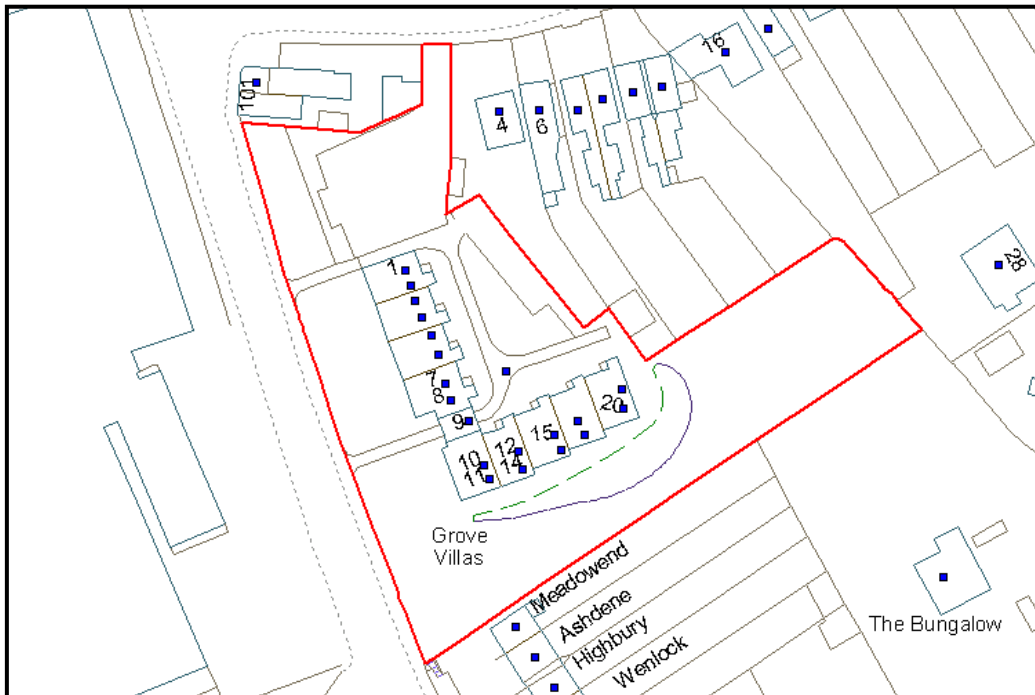
© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2011
Figure 42 - Named cottages.



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Figure 43 - Parent and Child BLPU Polygons.

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Section 7 - Examples and Diagrams



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Figure 44 - Named group of properties where full PAO extent is known.



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Figure 45 - Named group of properties.

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7.8 Property Footprints and Estate Boundaries

7.8.1 A single BLPU Polygon must represent one BLPU and therefore one Approved Preferred LPI. The BLPU Polygon by itself cannot show whether a Record is a Parent or a Child. Child BLPU's must each have their own discrete BLPU Polygon and must not be linked to or rely on the BLPU Polygon of the associated Parent Record to determine relationships. In

Figure 46, the scenario is as follows:

- The site comprises 3 blocks of flats.
- The site Record is the Parent BLPU Record.
- The extent of the site Record cannot be inferred from the base mapping detail because it is an open plan estate.
- Each block has a name, which, with the flat number, comprises the Child Record.

7.8.2 In this example do the following things:

- Create a BLPU Polygon for each of the flats within each of the blocks.
- Create a separate BLPU Polygon for the Parent BLPU Record which represents the block.
- Only create a BLPU Polygon for estate boundaries if a Land Parcel BLPU is present in the LLPG.



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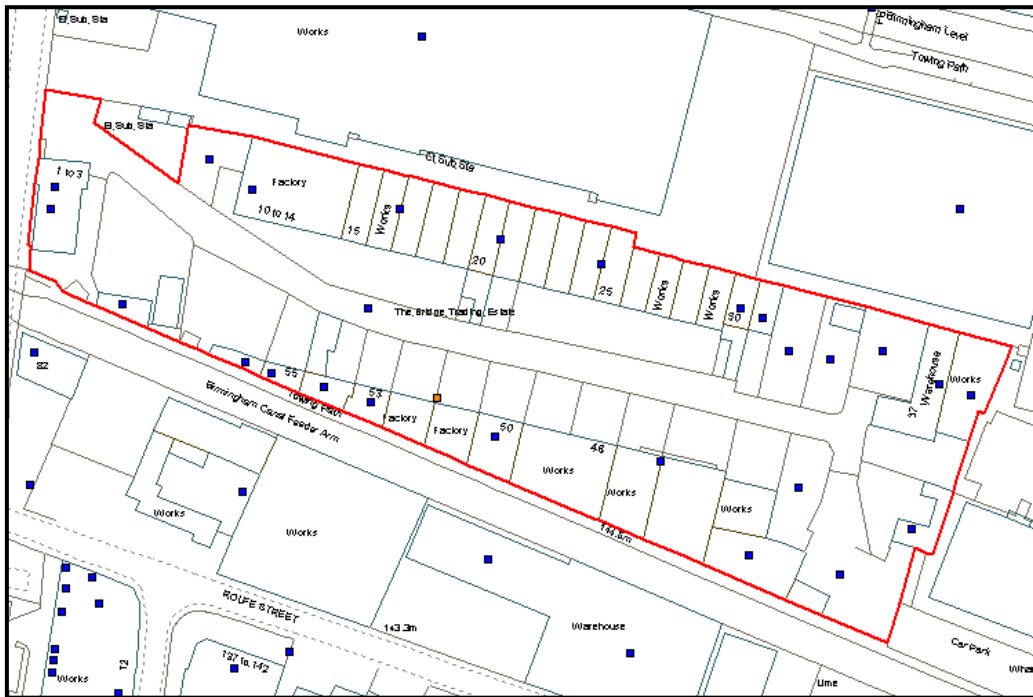
Figure 46 - Property Footprint Estate.

DEC-BLPU-P

Section 7 - Examples and Diagrams

7.9 Industrial Estates / Business Parks

7.9.1 **Figure 47** shows a typical example of industrial properties.

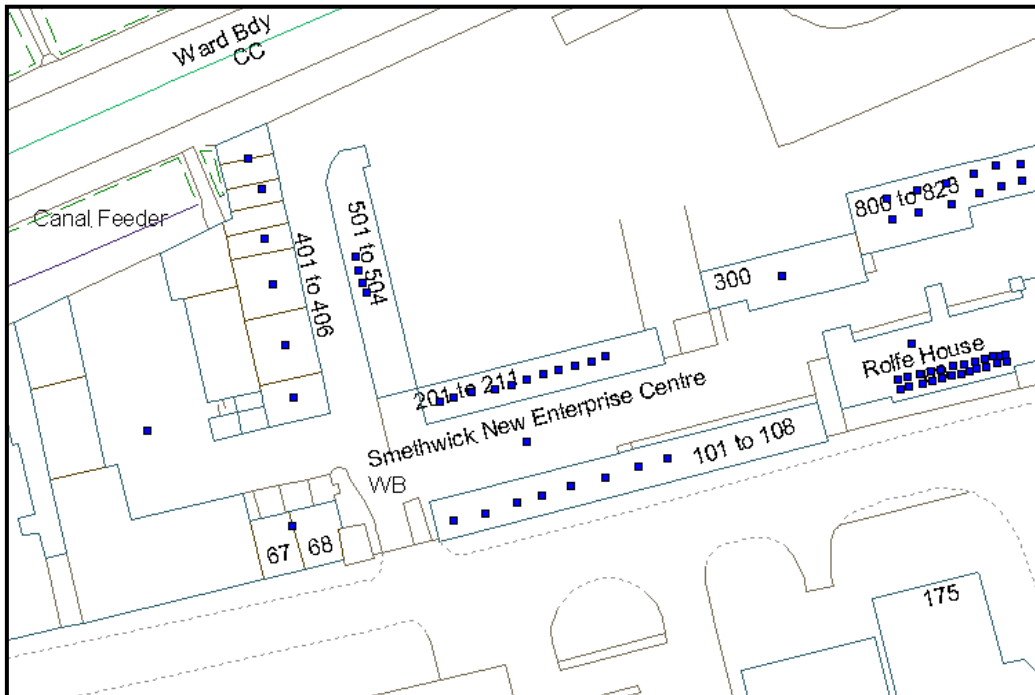


© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2011
Figure 47 - Industrial Estate.

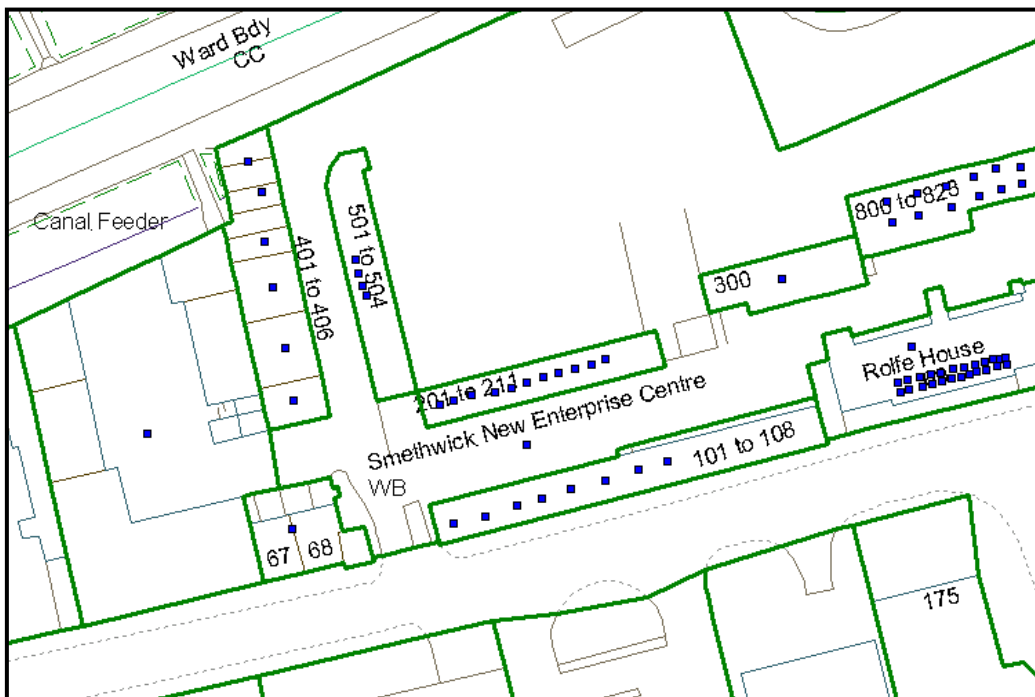
- 7.9.2 In the example shown in **Figure 48** and **Figure 49**, apply the following rules:
- Use the BLPU Points and the data included within the LLPG as the basis for creating BLPU Polygons.
 - If there is only a single BLPU Point, create a single BLPU Polygon for the whole Business Park.
 - If there are multiple BLPU Points, create a Parent Record BLPU Polygon for the whole site, and create a BLPU Polygon for each Child Record, based upon a building footprint.
 - Do not attempt to capture the communal yard areas between buildings within the child BLPU Polygons.
- 7.9.3 If development is more recent, business parks and industrial estates comprising a number of units are captured in the LLPG as Parent Records. Create a BLPU Polygon encompassing the whole property. If the unit numbers are clearly identifiable on the base mapping, create a BLPU Polygon for each Child Record based upon the footprint of each building.

DEC-BLPU-P

Section 7 - Examples and Diagrams



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Figure 48 - Site with units.



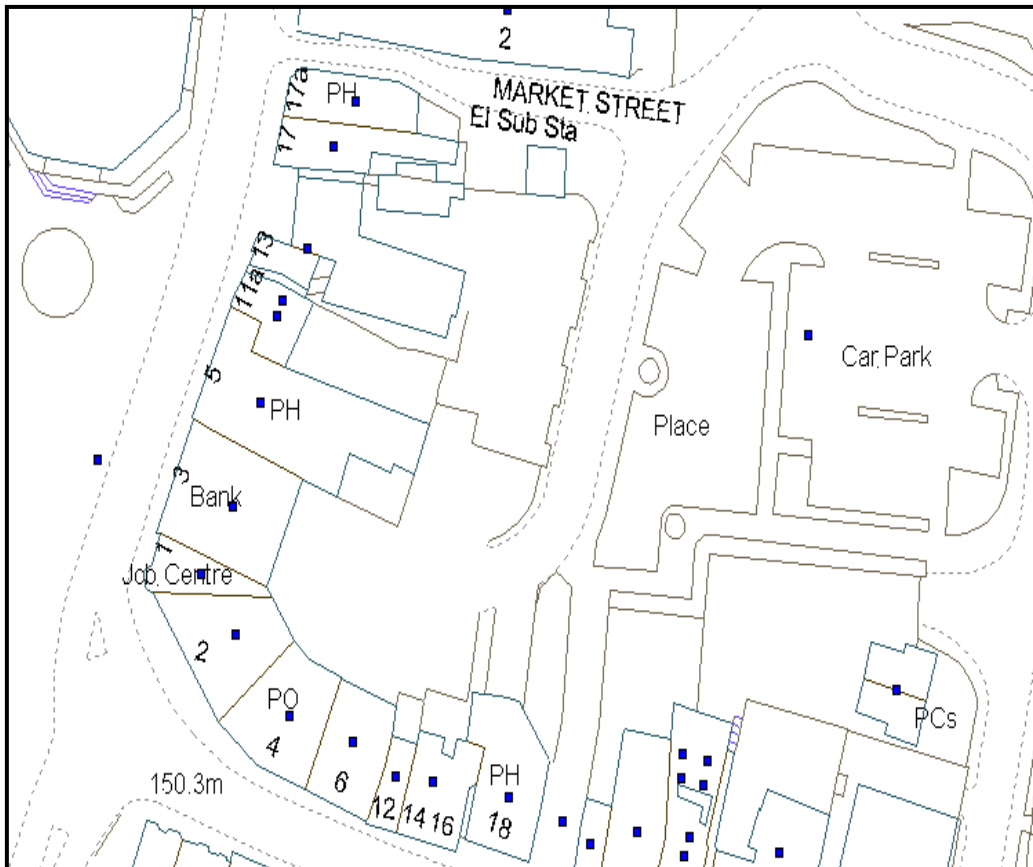
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Figure 49 - Site with units with BLPU Polygons.

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7.10 Shopping Parades

7.10.1 **Figure 50** and **Figure 51** show the following two scenarios:

- There is no unambiguous map data which defines the BLPU extents for the shop units. Create a BLPU Polygon for each of the shop units, using the footprint of the building. If there are any flats over the shops, located by the BLPU Point, create a BLPU Polygon for each flat using the same footprint.
- There is a yard behind a public house and other properties. It is not possible to determine from the map data to which property the yard should be attached, therefore do not include it in the BLPU Polygon of any of the adjacent properties. Refer the yard to the Authority Address Custodian to consider creating a separate BLPU for this piece of land.

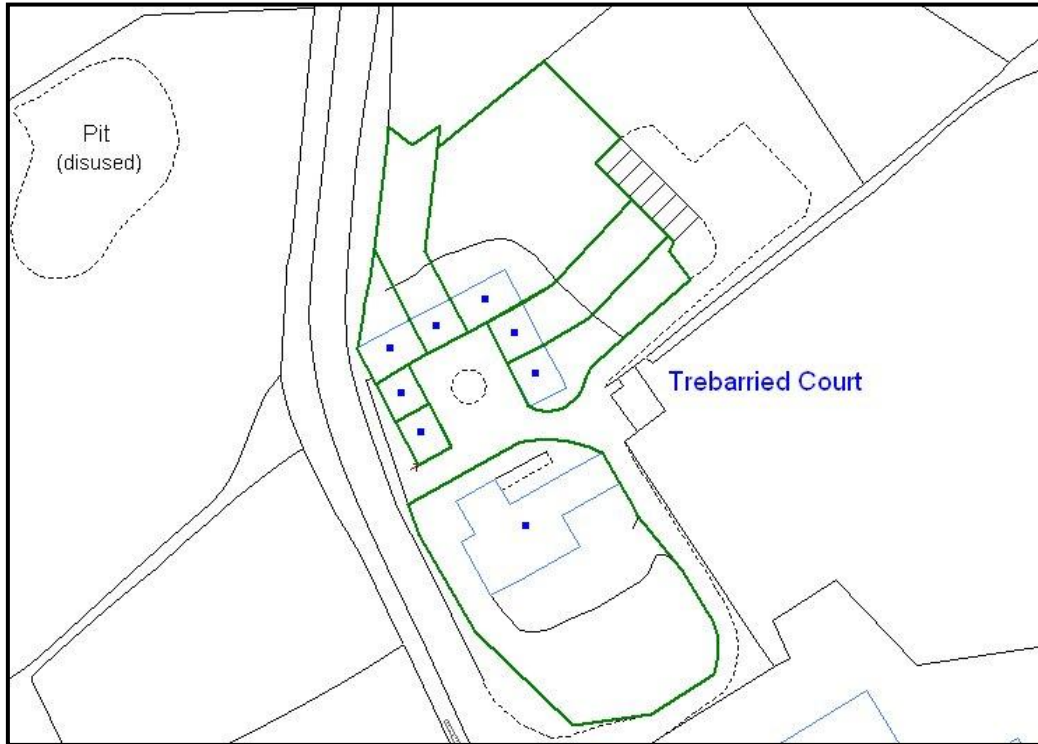


© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2011
Figure 50 - No unambiguous map data.

DEC-BLPU-P

7.11 Farmsteads and Fields

7.11.1 Some farmsteads within a rural area comprise a number of BLPUs because the barns are converted into either dwellings or business units. Create a BLPU Polygon for each converted unit based on the curtilage of the unit. See **Figure 52**.



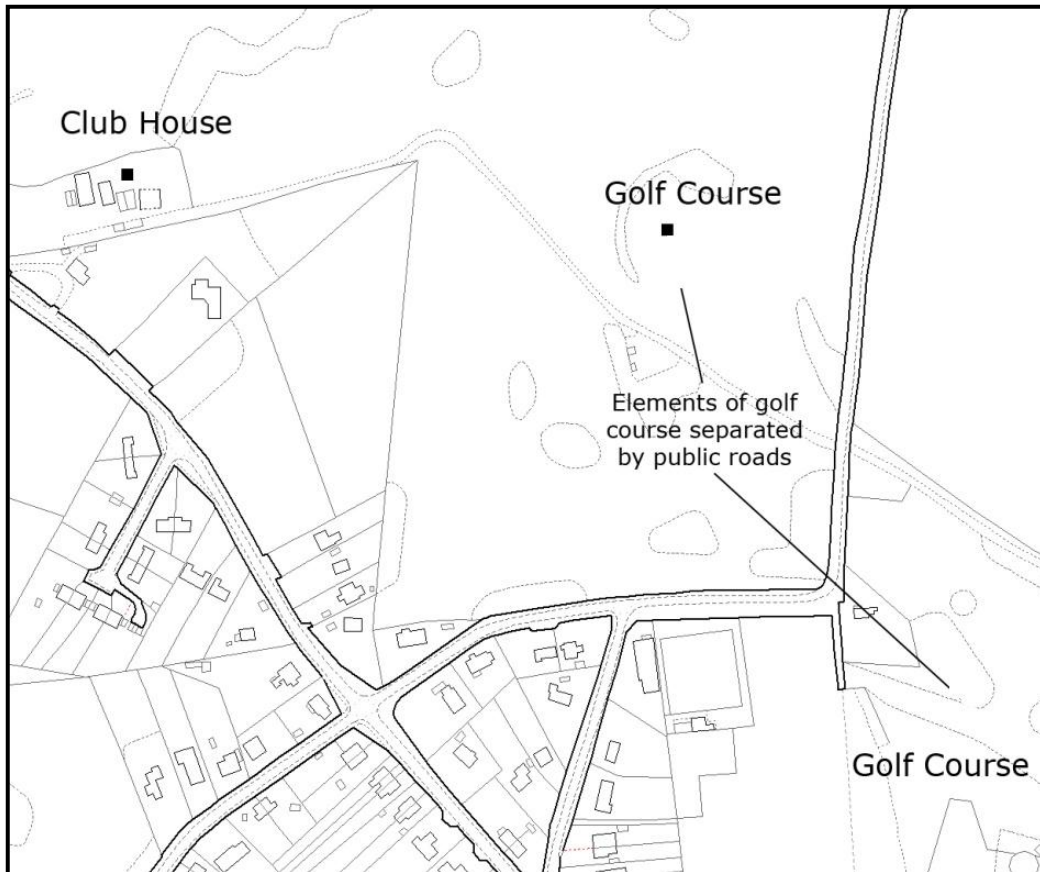
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Figure 52 - Farmstead with multiple BLPUs.

7.11.2 If a field is split by a geographical feature which is not a BLPU in its own right, for example a stream or a drain and the field is a single BLPU then draw one BLPU Polygon for the field.

7.11.3 If a field is split by a geographical feature which is a BLPU in its own right, then draw one BLPU Polygon for the field and split it where the other BLPU interrupts it.

7.12 Multiple BLPUs Within One Site

7.12.1 In **Figure 53** there are multiple BLPUs captured for the golf course, including the club house and the course itself. In this case create a BLPU Polygon for each BLPU, and create a Parent BLPU Polygon for the whole golf course and all its Child Records.



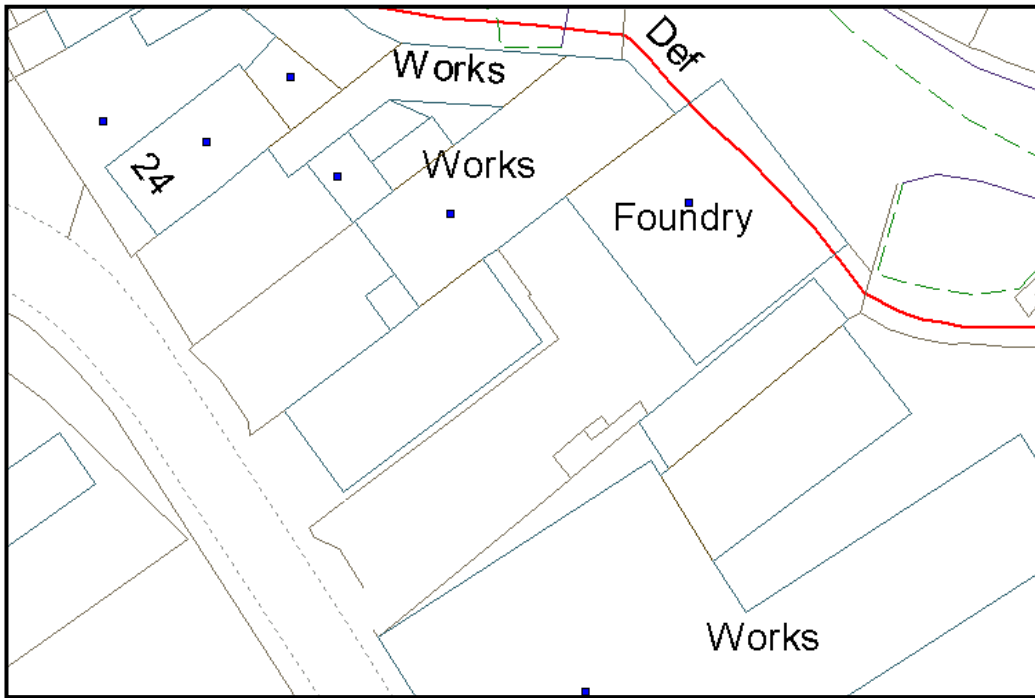
© Crown copyright. All rights reserved. Powys CC Licence No 100025371 2010
Figure 53 - Golf Course and other non-postal addresses.

7.13 Local Authority Boundary

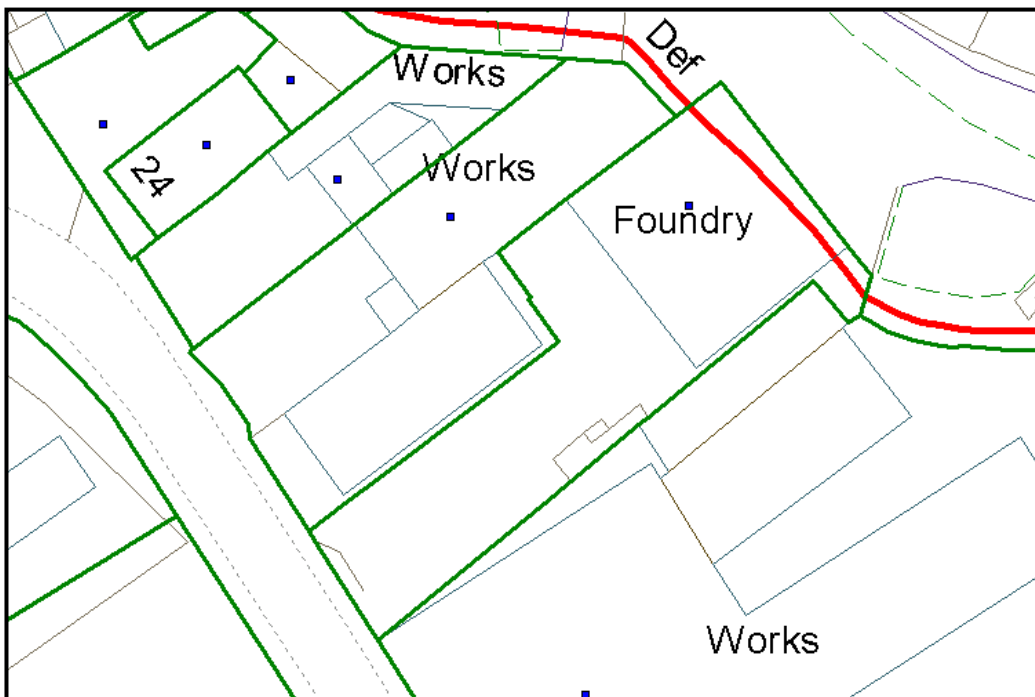
7.13.1 If the administrative boundary does not follow base mapping features and, for example, crosses fields, other land parcels or buildings, ensure the BLPU Polygon extent encompasses the entire land parcel, or building. Do not split the extent along the administrative boundary. See **Figure 54** and **Figure 55**.

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Section 7 - Examples and Diagrams



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Figure 54 - Authority boundary over property extent.



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Figure 55 - Authority Boundary over property extent with BLPU Polygons.

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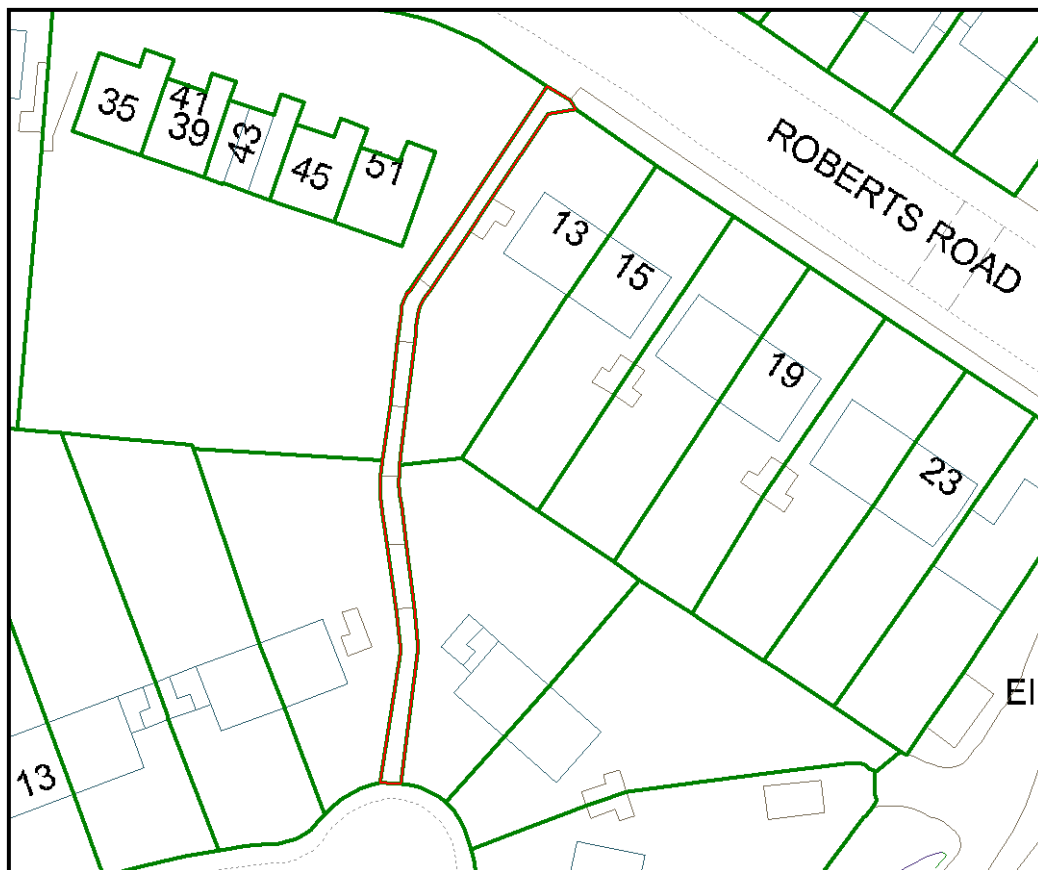
Section 7 - Examples and Diagrams

7.13.2 If an administrative boundary crosses a property, the convention is for the authorities concerned to agree which authority will be responsible for that property, and therefore to which council the rates etc. should be paid. The BLPU should reflect these decisions. Create a BLPU Polygon which includes the full BLPU extent for all relevant properties, irrespective of the formal boundary. However, this does leave a potential issue regarding planning permissions etc., if the convention is that an application is made to both authorities, even if one of them is designated the primary decision making authority. The second authority must still register the planning application in respect of its area. A local Record and extent is useful in these circumstances.

7.14 Street BLPU Polygon Extents

7.14.1 If Street extremity points are set at junctions with other Streets, create a Street BLPU Polygon extent and define the extent by the position of BLPU's addressed to that Street.

7.14.2 In **Figure 56** the footway starts in a similar way to the Street as described in **Section 7.14.1**. Therefore the same rules apply.



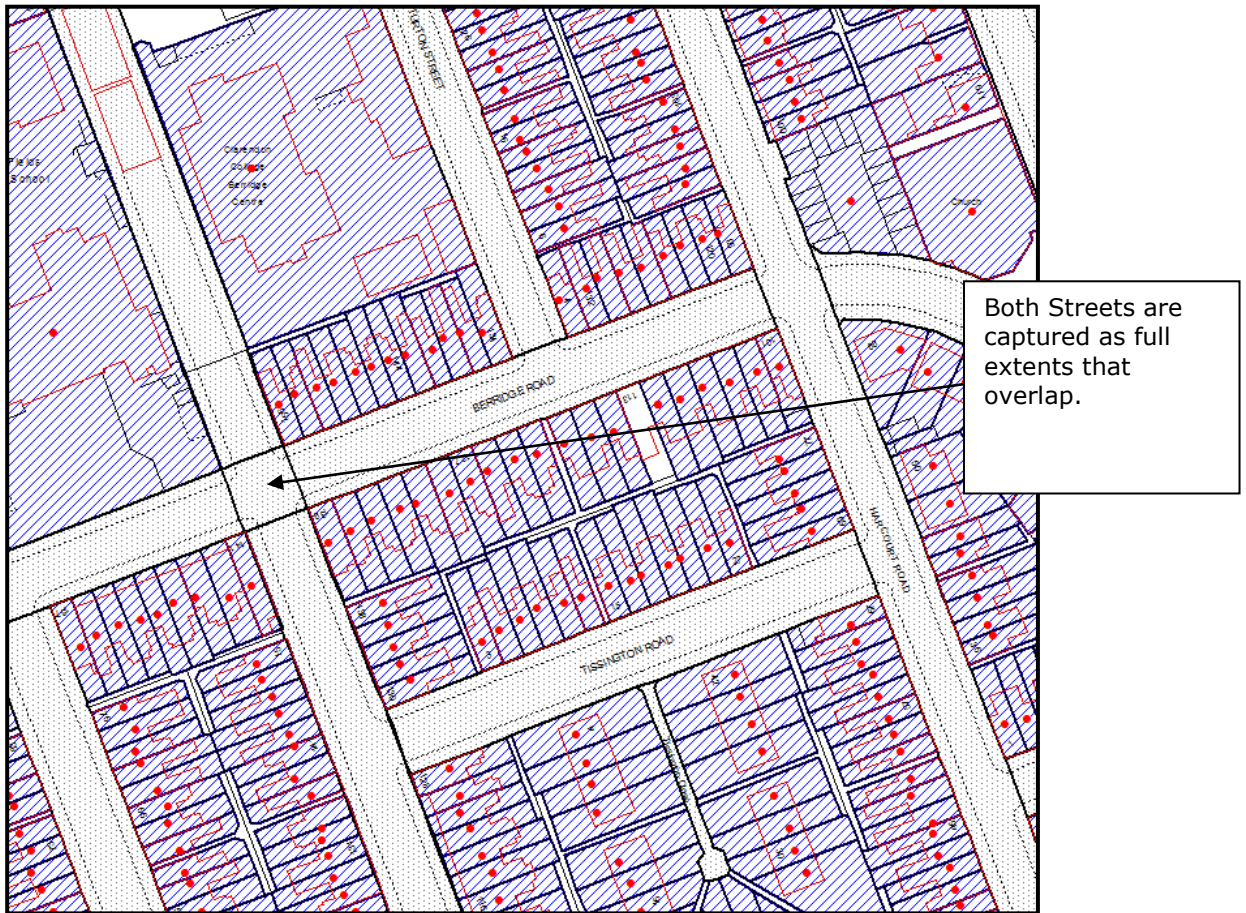
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Figure 56 - Footpath extents.

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7.15 Junctions

7.15.1 If two or more Street BLPU Polygons meet at junctions, then the Street BLPU Polygons are drawn as complete through BLPU Polygons, thus giving a junction which is covered by two BLPU Polygons. See **Figure 57**.



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Figure 57 - Examples of road priorities.

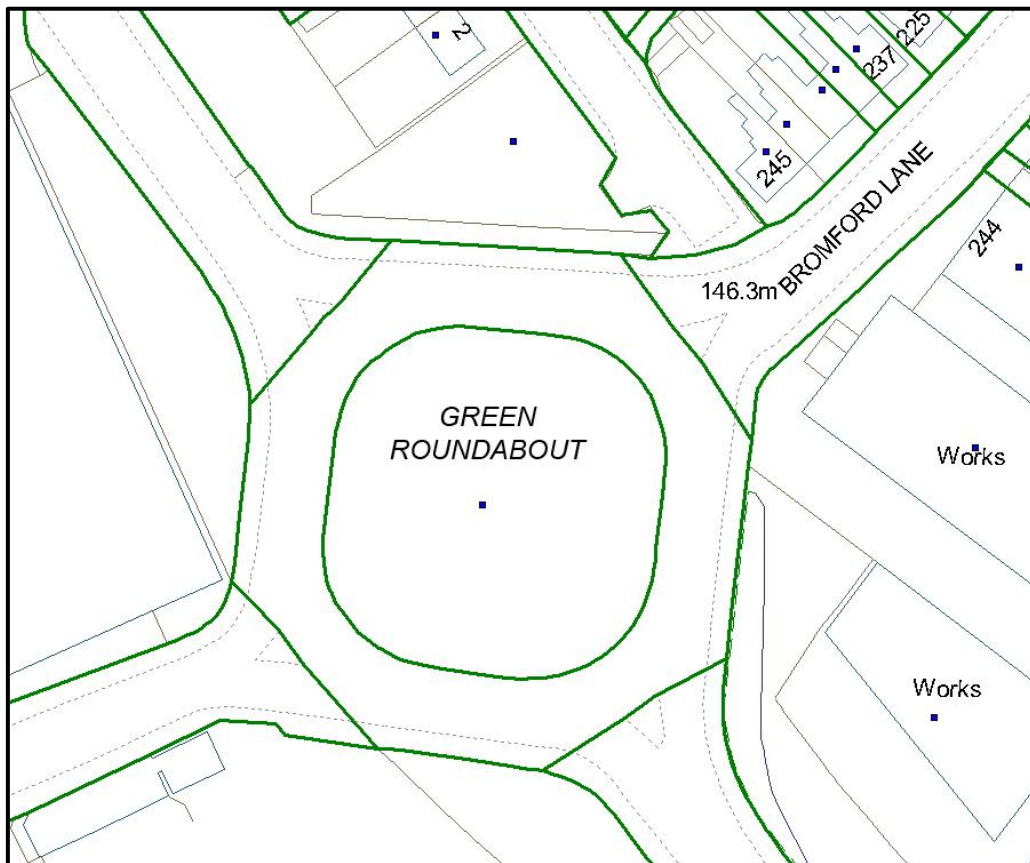
7.16 Roundabouts

7.16.1 If a roundabout is named and is a separate entity with its own USRN, capture a Street BLPU Polygon for each road leading to the roundabout up to the edge of the roundabout. Capture a Street BLPU Polygon for the carriageway around the roundabout excluding the land in the centre of the roundabout. See **Figure 58**.

7.16.2 If a roundabout is not named, capture a BLPU Polygon for the land in the centre of the roundabout.

DEC-BLPU-P

Section 7 - Examples and Diagrams



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Figure 58 - Named roundabout.

7.16.3 Trim highway extents that cross the authority boundary to the boundary.

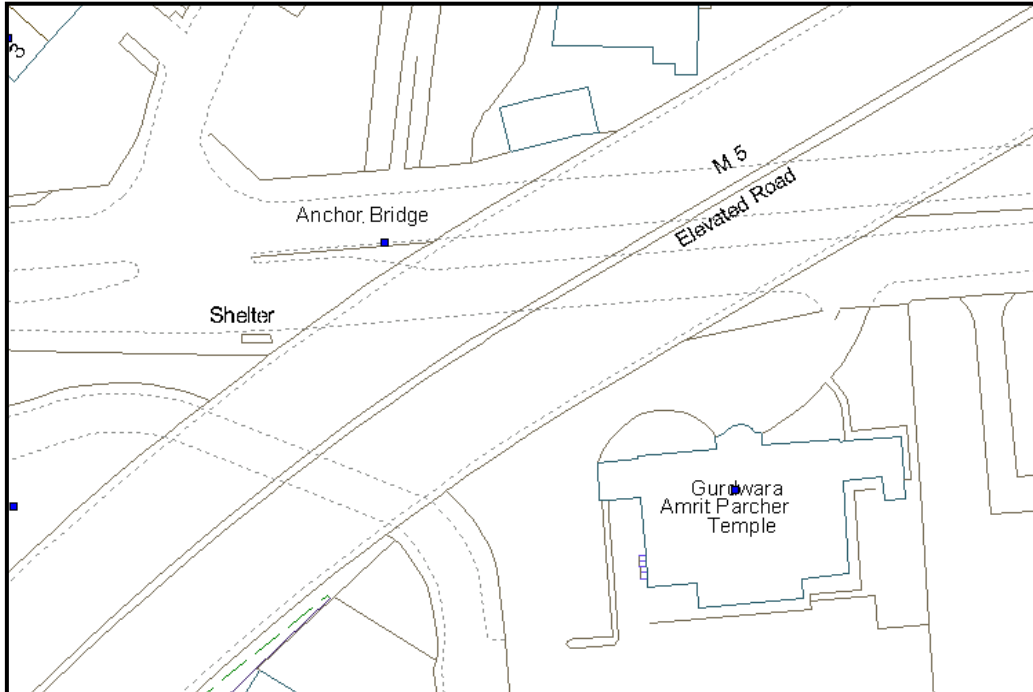
7.16.4 Differentiation between surfaces:

- Capture slipways with the Street they belong to.
- If the slipway leads up to a roundabout then capture it to the Street and not the roundabout.
- If the slipway leads to another Street then capture it with the Street that it has originated from. Also capture it up to the edge of the Street it leads to.
- Capture all footways to the adjacent Street.
- Capture all verges as a part of the Street.
- Capture the openings for unnamed subways which are BLPUs in the LLPG. Named subways are Streets in the NSG and not within the scope of this document.
- Central reservations are part of Streets in the NSG and not within the scope of this document.
- Flag any anomalies in a bulk data capture exercise for the Authority Address Custodian to review as part of the second phase of the exercise.

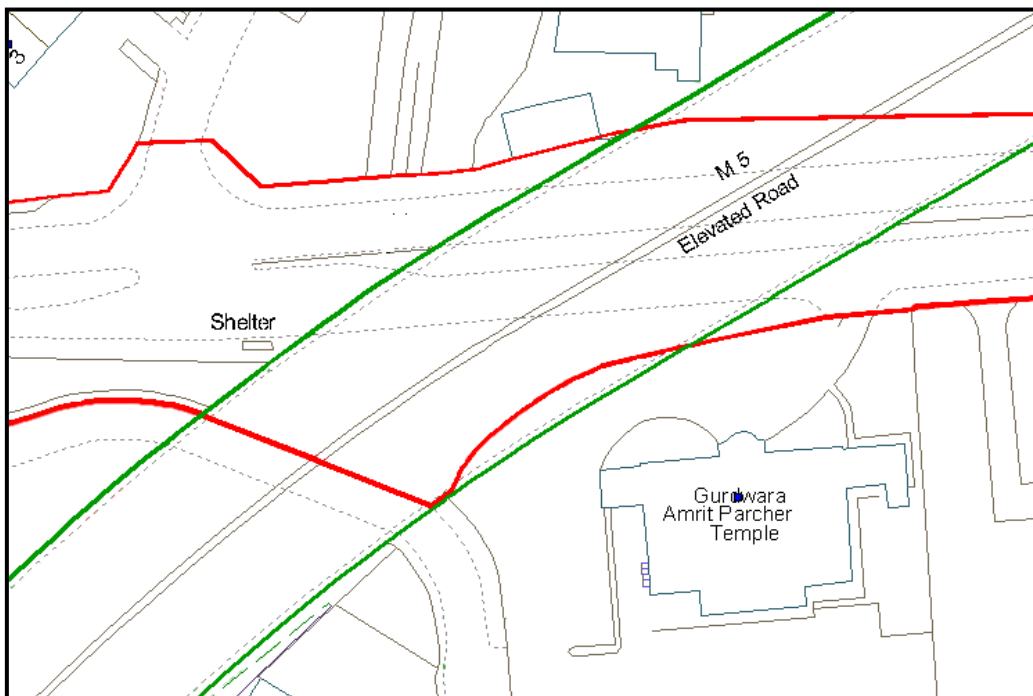
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Section 7 - Examples and Diagrams

7.16.5 Create Street BLPU Polygons that overlap in the 3rd dimension as overlapping BLPU Polygons. See **Figure 59** and **Figure 60**. In this case the motorway is elevated over the Street. These diagrams show how to draw BLPU Polygons for the Street BLPUs in this scenario.



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Figure 59 - Flyovers.



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Figure 60 - Flyover with BLPU Polygons.

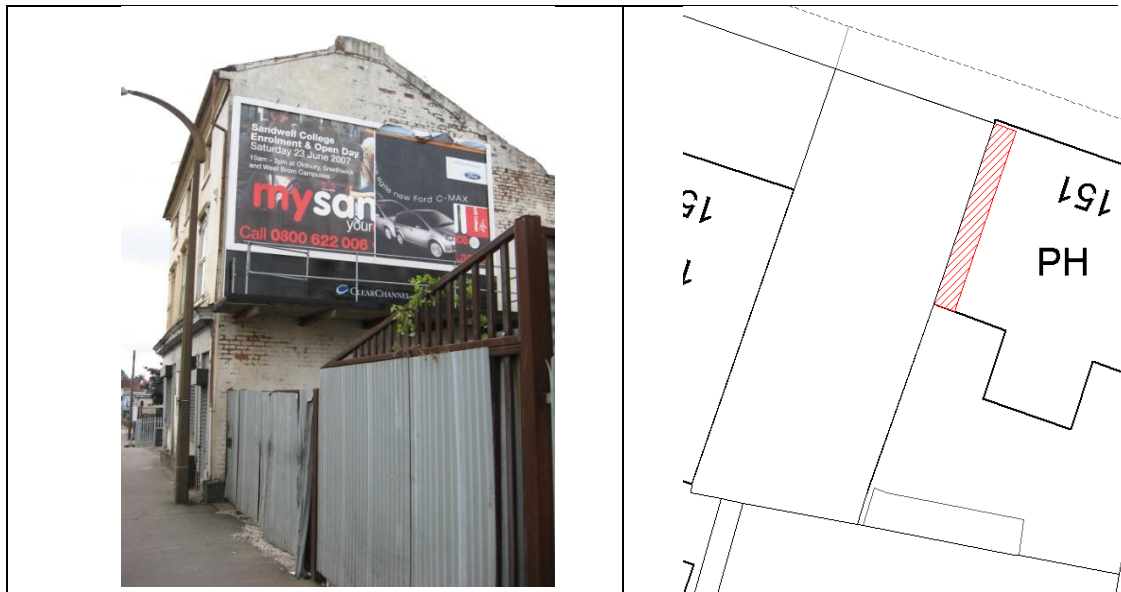
DEC-BLPU-P

Section 7 - Examples and Diagrams

7.17 Objects without a Postal Address (OWPAs)

7.17.1 The following is a non-exhaustive list of Objects without a Postal Address (including street furniture) which are within the scope of the DEC-NLPG, therefore may require a BLPU Polygon. In most cases features such as lakes and nature reserves have a clear physical extent which can be captured. If the footprint is insignificant then a point is sufficient, for example milestones or free standing advertisement hoardings. See [Section 5.8.3](#).

Allotment	Nature Reserve	Lock
Named lake	Weir	Electricity Sub station
Named reservoir	Mill	Quarry/Mine
Memorial statue	Aqueduct	ATM
Fountain	Named footbridge	Recycling point
Milestone	Telecommunications mast	Civic amenity site
Named park	Public Convenience	Weigh station
Named garden	Car park	Named square
Playing field	Garage block	Bus Shelter
Recreation Ground	Place of Worship	Advertising right
Wood	Cemetery	Tourist Information board
Forest	Named cave and pothole	Local Authority CCTV camera



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Figure 61 - Wall mounted advertisement.

7.18 Wall-Mounted Advertisements

7.18.1 When drawing a Polygon for a wall-mounted advertisement, ensure that the Polygon is completely within the boundary of the Polygon of the Parent BLPU. See **Figure 61**. This leads to the advertisement appearing to be on the inside, rather than the outside, of the Parent BLPU. The Polygon should be drawn in this way to allow the correct results from any spatial analysis.

DEC-BLPU-P

Appendix A - Objective of Gazetteers Polygon Working Group

Remit of the Gazetteers Polygon Working Group

1. Overview

- 1.1 To write a document that defines how BLPU Polygons are captured, constructed, maintained and referenced to the LGIH Gazetteers at a land, property and street level.
- 1.2 Structure of document to include the Business Case for doing it, particularly for group members to document why they did it, including the:
 - Drivers: to be the planning expert system, capture once use many times, spatially enabling linked datasets, spatial integration with other geographical data, data management of other spatial data through management processes of LLPG, Land Searches, Land use mapping.
 - Savings: time taken to complete queries before and after polygonisation, effects on PAI movement.
 - Benefits: links back to drivers
- 1.3 Members to document what are the future drivers:
 - INSPIRE
 - Transformational Government
 - All LG users require BLPU Polygons
 - Census
- 1.4 Discussion of the process will identify what's missing from LGIH Gazetteers. How to go about capturing polygons - the process will involve the spatial querying of gazetteer and linked datasets.

2. Property types.

- 2.1 Best practice for method of capture, i.e. small geographical coverage at a time, quality checks, experience of using data capture companies and in-house capture.

3. Document the Rules for BLPU Polygon Capture

- 3.1 In particular:
 - Attributes, inferred use, property type, positional quality
 - What source/s was the BLPU Polygon or parts of the BLPU Polygon captured against
 - Quality of source captured against
 - What scale is the source
 - The difference between vector and raster source data
 - All BLPU Polygons to be captured against large scale vector based polygonised map base.
 - Issues and benefits associated with the use of links to TOIDS and versions of source/s
 - TOIDs life cycles.
 - Parent/child relationships
 - All entries in Gazetteers to have BLPU Polygons over time
 - Record type/s
 - Provenance usage – what Provenance code relates to what source dataset
 - What are extent/s...

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Appendix A - Objective of Gazetteers Polygon Working Group

- What are LG required to capture
- extent of inferred street - type 21
- (it has been suggested in the forthcoming consultation on the LSG data entry conventions document that use of the range starting at type 61 will avoid confusion over these records between the NLPG and NSG)
- PRoWs
- Planning extent
- Extent of obligation
- Acknowledged use of OS mapping in diagrams to show conventions
- Validation – i.e. geometry validation, extent should contain Gazetteer points.

4. Document the Rules for Use of BLPU Polygons

4.1 In particular:

- How to be used
- What are the limitations
- Metadata
- Scale of capture to be used at in GIS but also in databases such as Oracle.
- Used between these scales
- Standard set of symbology for users
- Definition of usage

5. Document the Rules for Maintenance / PAI

5.1 In particular:

- How to identify changes and types of change
- Versions of BLPU Polygons
- Real world change
- Non-real world change
- Business driver for change
- Full extent or partial
- Life cycle of BLPU Polygon link to BLPU
- Version of source of BLPU Polygon changes
- Textually
- GI system driven
- Review of necessity

6. Transfer format/s

6.1 How to transfer the BLPU Polygon and attribute data to be considered at a later stage once the above has been agreed.

6.2 The format/s and record structure for the transfer of data will also be defined at that stage.

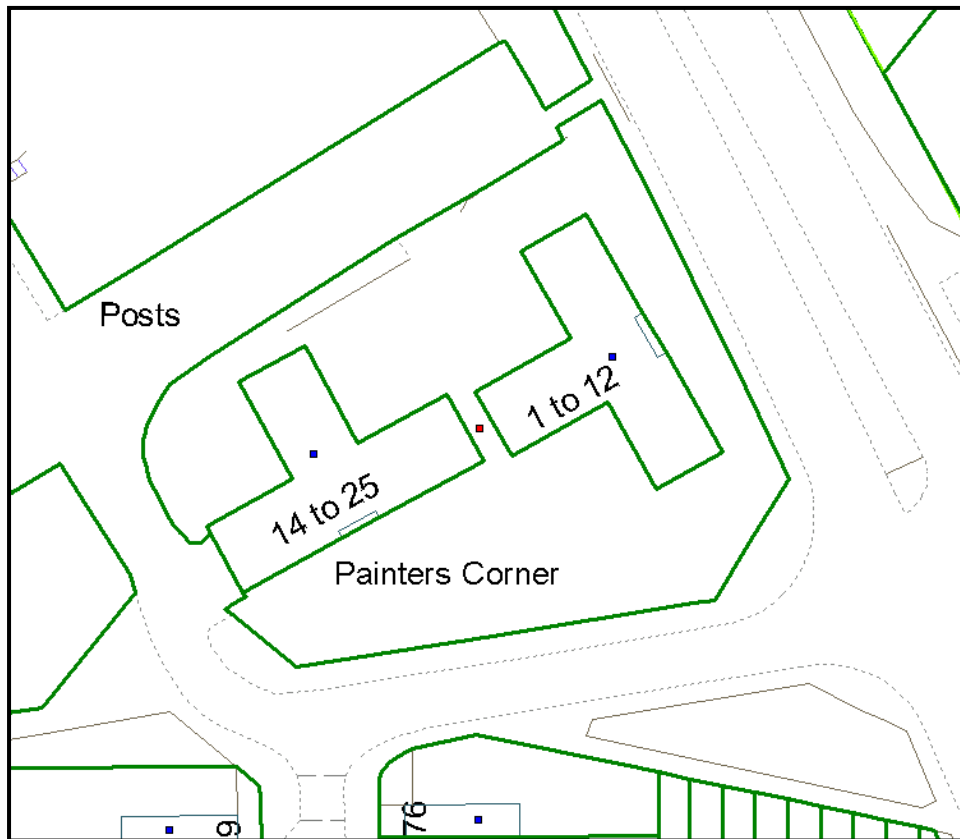
Appendix B - Initial Data Capture

1. Background

1.1 Purpose of this Appendix

- 1.1.2 This Appendix is primarily for those Contributing Authorities which have not created any BLPU Polygons and are carrying out an initial bulk data capture exercise. This section provides guidance and rules to apply when polygons are first created for every Record in the LLPG. It describes the importance of BLPU Points in the BLPU Polygon data capture process.
- 1.1.2 For information about how to improve the quality of the data after it has been captured, see **Section 7**.
- 1.1.3 When carrying out a bulk data capture exercise, use a phased approach. Create the BLPU Polygons in accordance with the rules in this document, and identify those which require further investigation by the Authority Address Custodian. Do this using the Confidence Level Flag to show that the source of the information is not very reliable, or by assigning a separate attribute to show that the base mapping used has a lower level of accuracy. For further information on the Confidence Level Flag see [Section 4.2](#).

2. Multiple Buildings within a Single Property Curtilage.

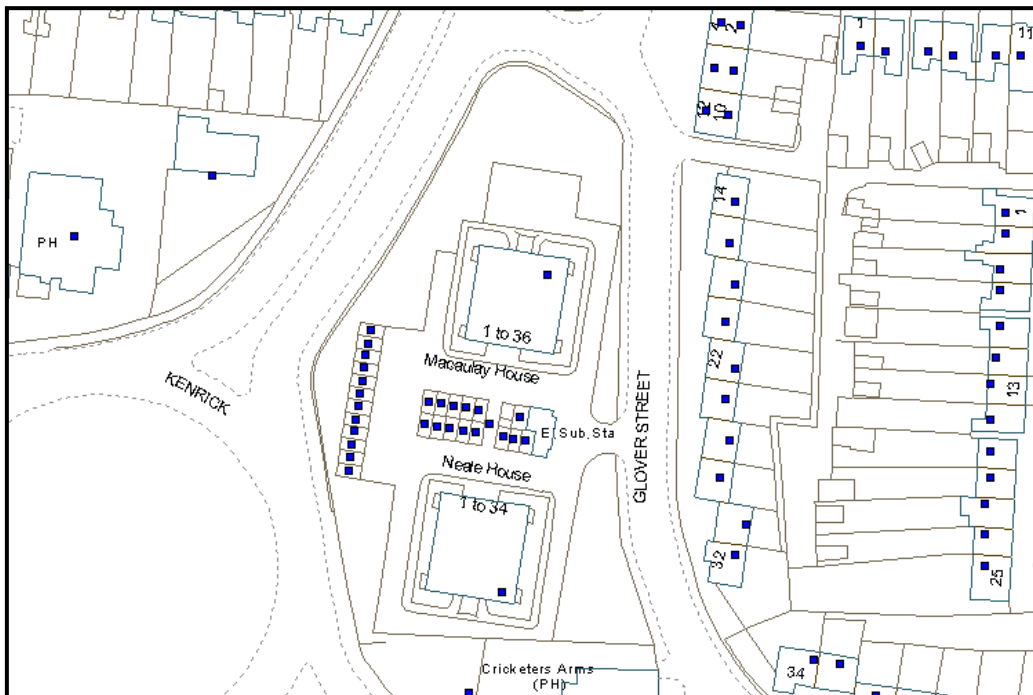


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Figure 62 - Multiple Buildings within a single curtilage example.

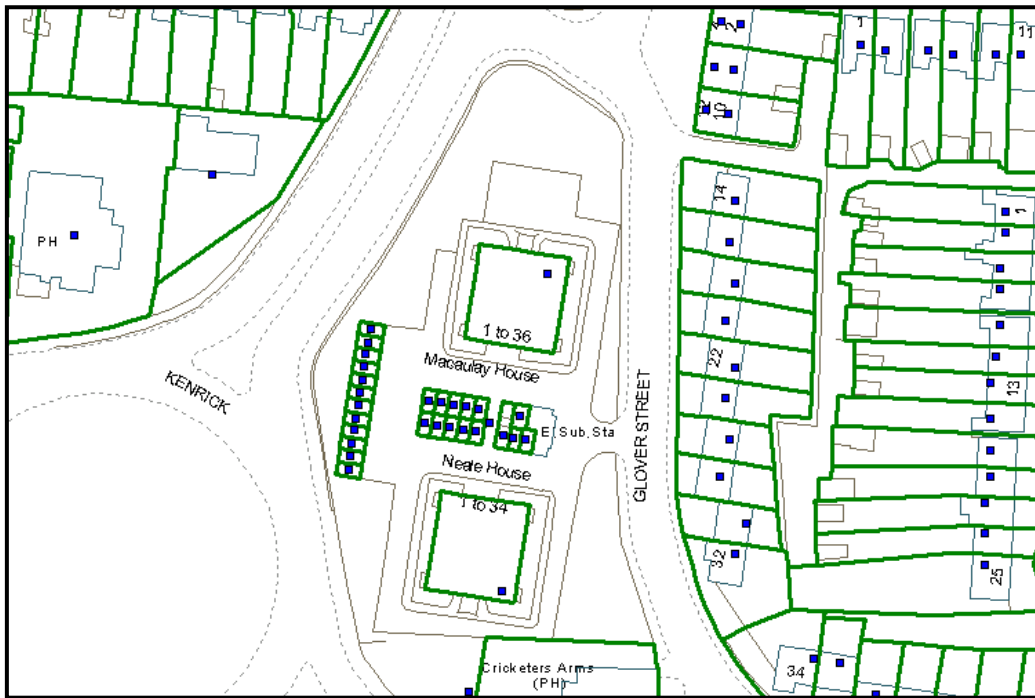
DEC-BLPU-P

Appendix B – Initial Data Capture

- 2.1 In **Figure 62**, there are no mapping features to determine the boundary between the properties. Capture the two properties as building footprints only. If a textual BLPU Record exists within the LLPG, capture the remainder of the area within the curtilage as a third BLPU Polygon. This scenario reflects, for example, housing blocks within a housing estate, and industrial units within an industrial estate.
- 2.2 If a block of flats has a name and has some constituent flats, then capture the BLPU Polygon for the block (that is, the Parent BLPU) to show the curtilage of the block. Create BLPU Polygons for the flats (that is, the Child BLPUs) using the footprint of the block. If a block of flats comprises more than a single module, and the numbering layout is known to the Authority Address Custodian, create each flat's BLPU Polygon using the respective module of the building.
- 2.3 The PAO extents for the two named properties in **Figure 63** and **Figure 64** are captured as building footprints because there are no map features or local knowledge to determine the boundary between the two properties.



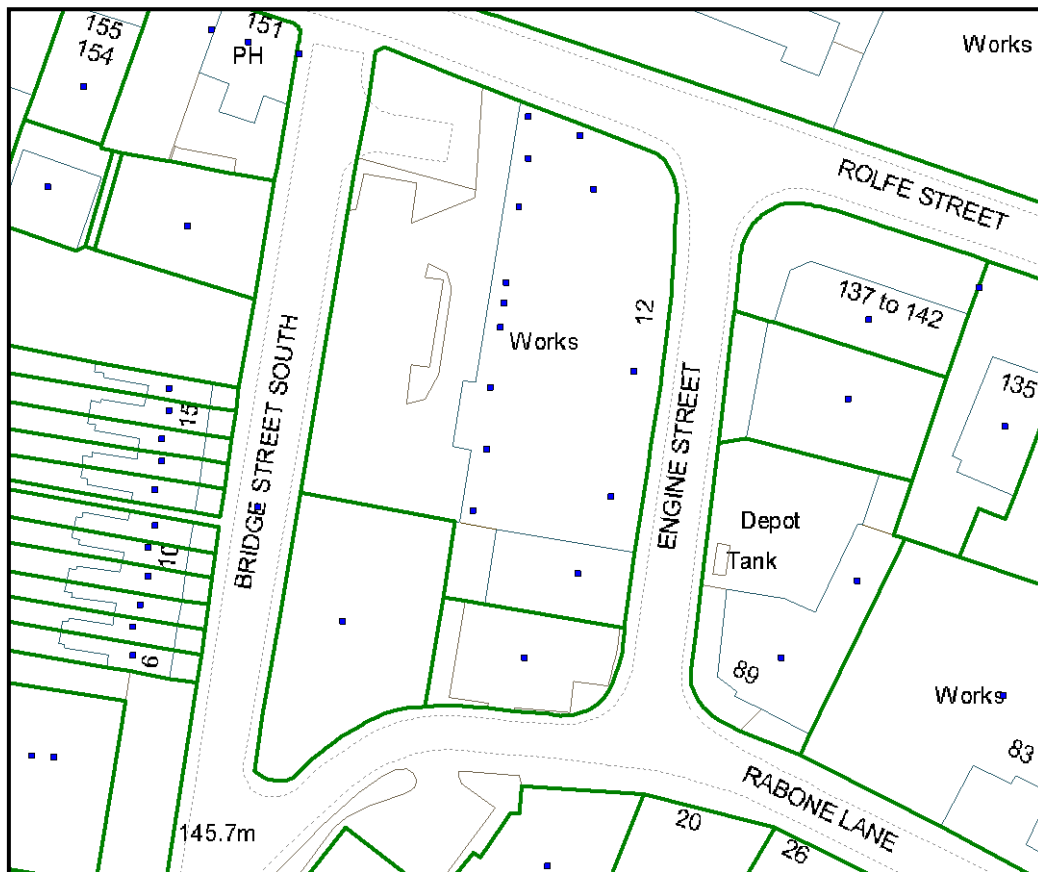
© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2011
Figure 63 - No map features to determine boundary.



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Figure 64 - No map features to determine boundary with BLPU Polygons.

3. Multiple BLPU Points within a Single Property

- 3.1 If there are two or more BLPU Points (with different coordinates) on one property within a single curtilage and any of those BLPU Points are identified as being in the wrong place, do not create a BLPU Polygon for that point. Identify the BLPU Point as ambiguous for the Authority Address Custodian to investigate as part of the second phase of the initial data capture exercise. See **Figure 65**.



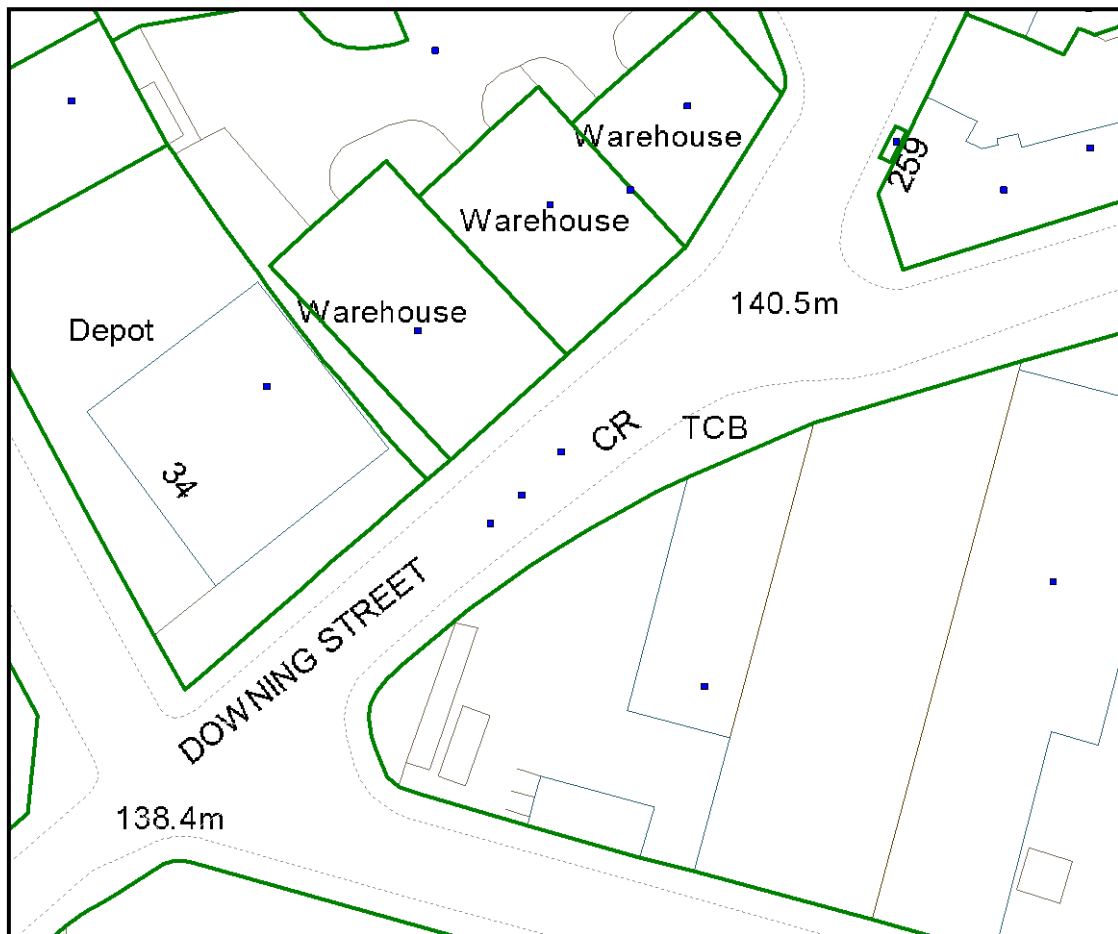
© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2011
 Figure 65 - Multiple BLPU Points within a single property.

4. Stray BLPU Points (BLPU Points which appear to be in the wrong place)

- 4.1 If there is a stray BLPU Point outside a property extent, for example, in the middle of a road, do not create a BLPU Polygon for that BLPU point. Identify the BLPU Point as having a query about its position for the Authority Address Custodian to investigate as part of the second phase of the initial data capture exercise. This does not apply to Street BLPU records. For more information on the coordinates assigned to Street BLPU Records, see Section 6.3.20 of the DEC-NLPG v 3.1. See **Figure 66**.

DEC-BLPU-P

Appendix B – Initial Data Capture

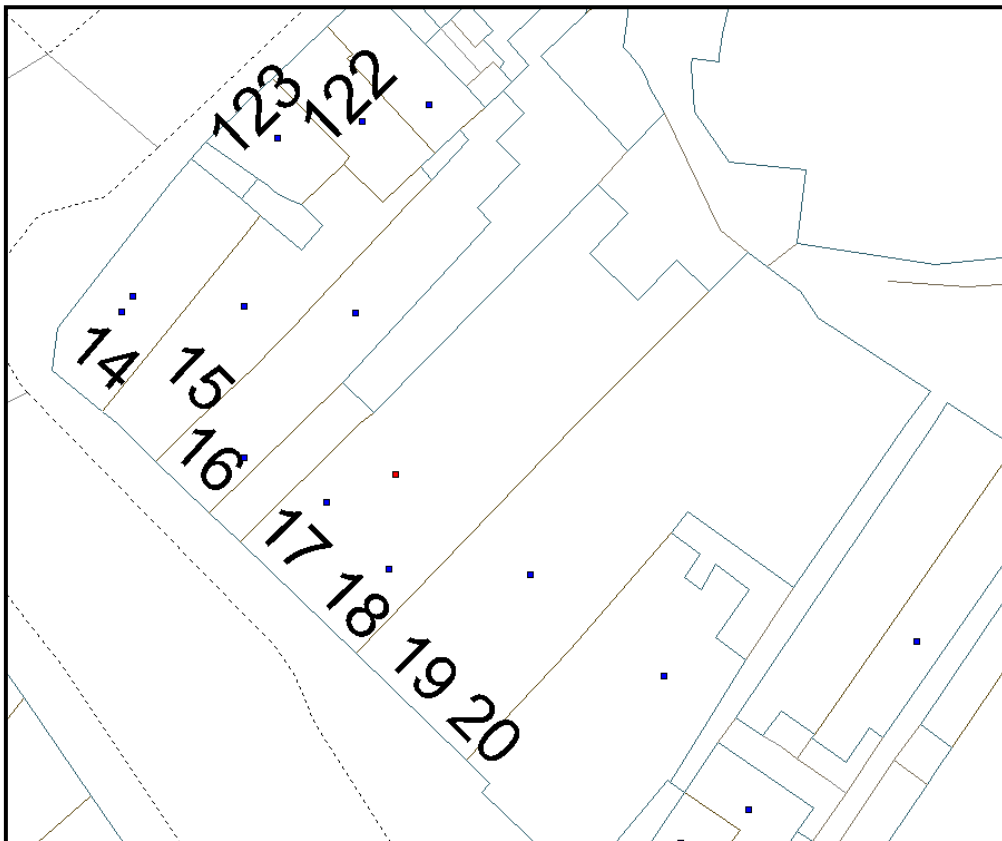


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Figure 66 - Stray BLPU Points.

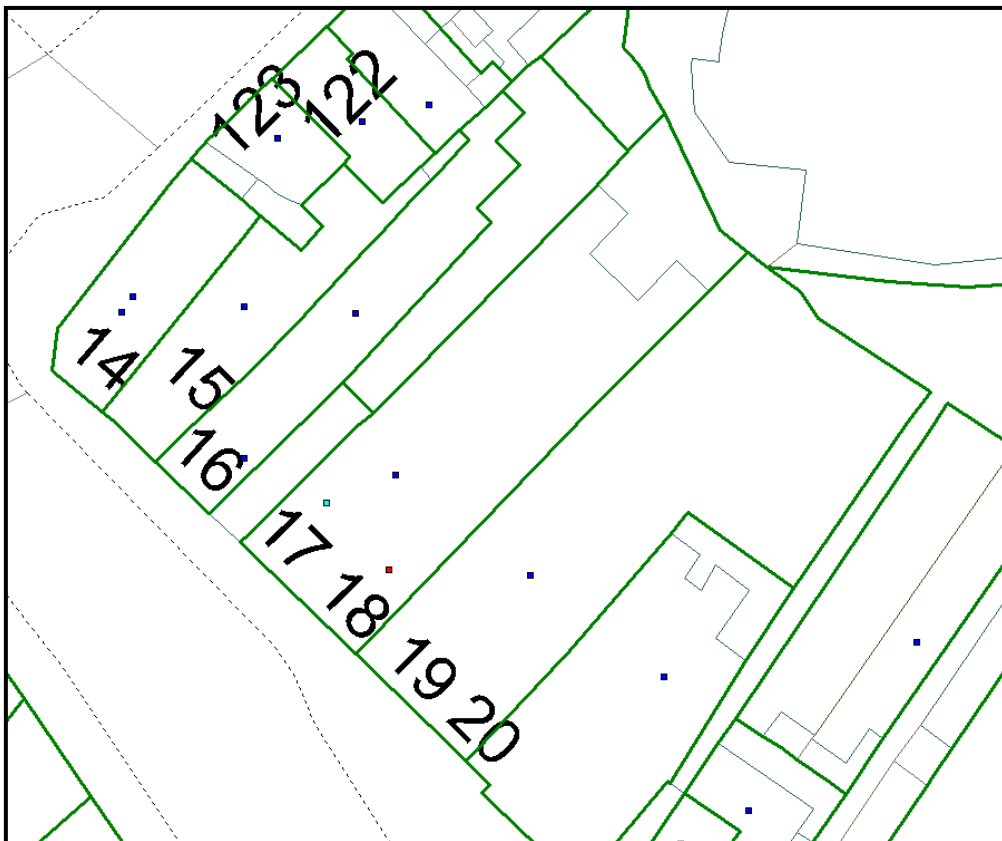
- 4.2 If a building curtilage does not contain a BLPU Point and the curtilage appears to represent a valid BLPU, create a BLPU Polygon. Identify the Polygon as unlinked for the Authority Address Custodian to investigate as part of the second phase of the initial data capture exercise.
- 4.3 If a single curtilage is missing a BLPU Point, inspect the adjacent curtilages to ensure that the BLPU Points contained within them do not include the extent of the unlinked curtilage.
- 4.4 In **Figure 67 and Figure 68** 17 Station Road has 2 BLPU Points, one with an Approved Preferred LPI of 17 Station Road, and one with an Approved Preferred LPI of 17 to 18 Station Road. The third BLPU Point which can be seen on this figure relates to 18 Station Road and this should be treated in the same way as the BLPU Point for number 17.
- 4.5 Use the BLPU Point with an Approved Preferred LPI of 17 to 18 Station Road to create the BLPU Polygon and flag the BLPU Point with an Approved Preferred LPI of 17 Station Road as ambiguous for the Authority Address Custodian to investigate as part of the second phase of the initial data capture exercise.

DEC-BLPU-P

Appendix B – Initial Data Capture



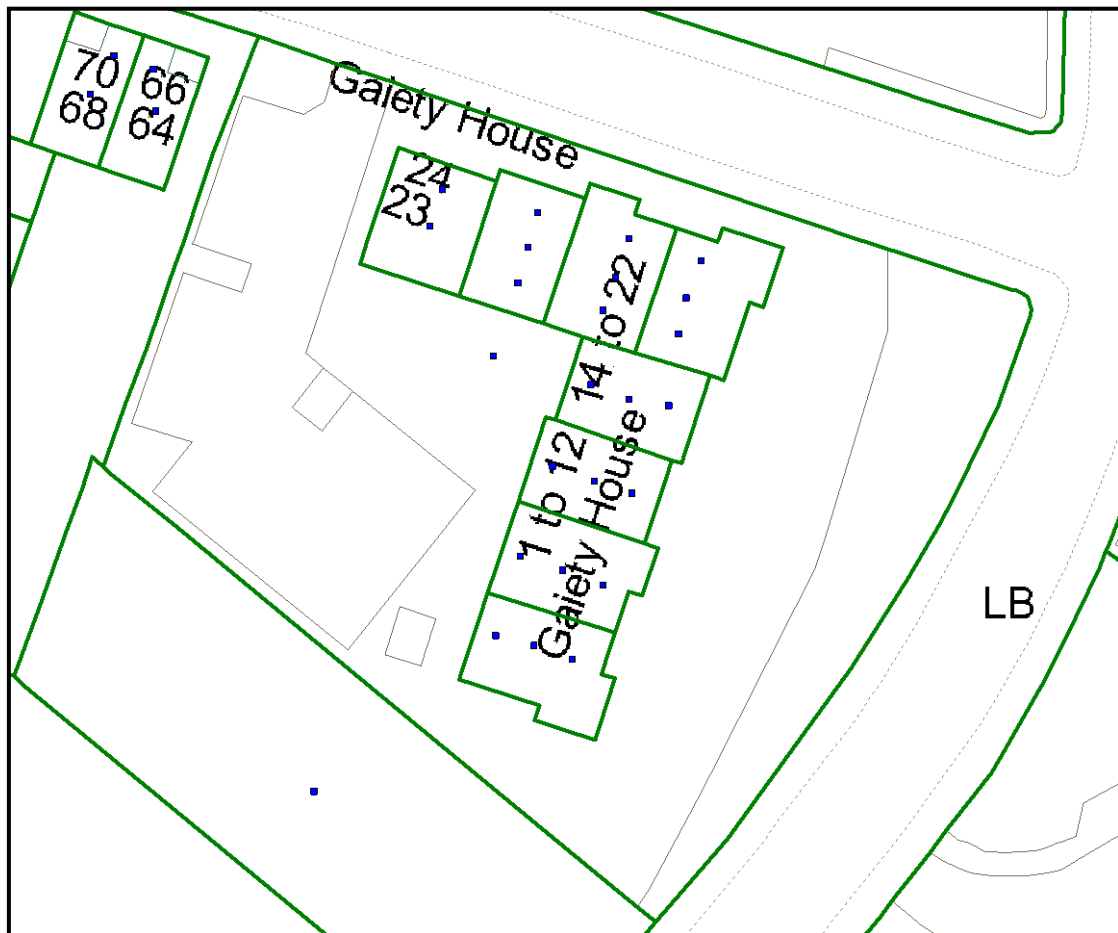
© Crown copyright All rights reserved. Sandwell M.B.C. Licence No 100032119, 2011
Figure 67 - Curtilages with more than 1 BLPU Point.



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Figure 68 - Curtilages with more than 1 BLPU Point with BPLU extents.

5. Complex Property Structures

- 5.1 For properties such as retail centres and blocks of flats, it is possible that there is more than one individual property within the building. If the mapping provides sufficient information, sub-divide such buildings. Create a Polygon for each BLPU. If the Authority Address Custodian cannot identify the boundary of each individual BLPU Polygon extent, use the footprint of the encompassing building. If the individual units or flats have different BLPU coordinates, identify each as ambiguous for the Authority Address Custodian to investigate in the second phase of the bulk data capture exercise.

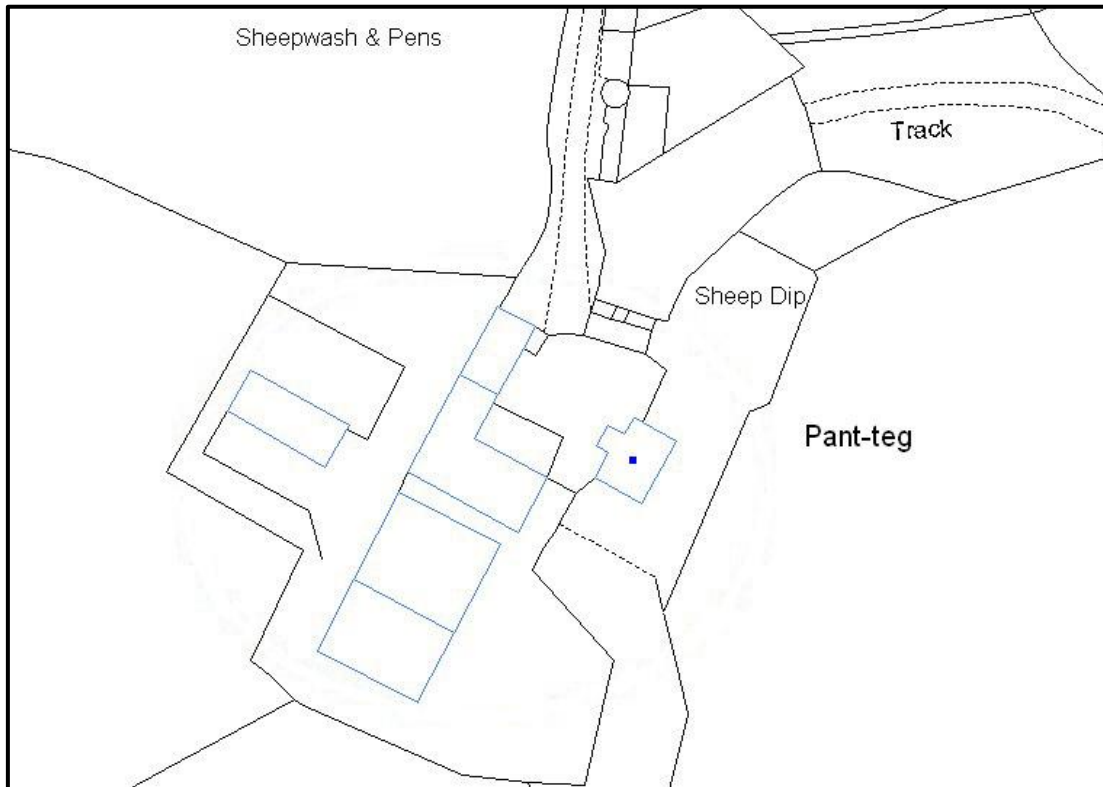


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Figure 69 - Complex Property Structure with Boundaries Shown.

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6. Farmsteads

- 6.1 Isolated farmsteads are a difficult challenge for BLPU Polygon definition. In **Figure 70**, there is only a single BLPU Point. Create a BLPU Polygon which groups the buildings, and flag the Record for the Authority Address Custodian to investigate in the second phase of the bulk data capture exercise.



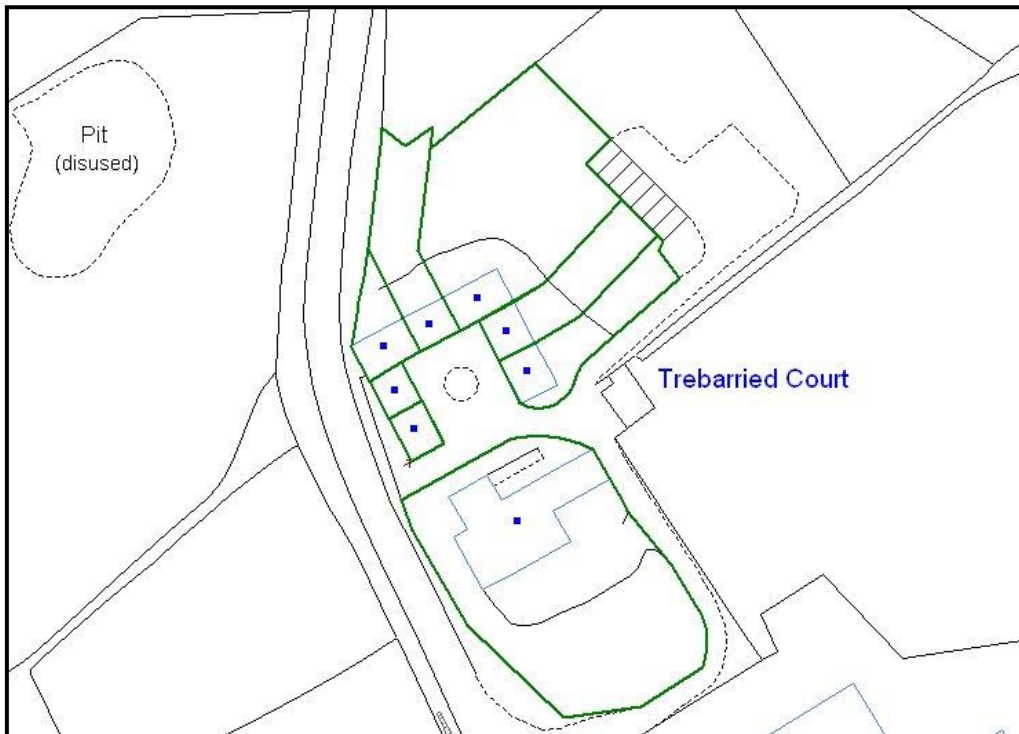
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Figure 70 - Collective grouping by BLPU Polygon.

- 6.2 If barns within a farmstead are converted into either dwellings or business units, create a BLPU Polygon for each converted unit. Base the Polygon upon the curtilage of the respective unit. See **Figure 71**.

DEC-BLPU-P

Appendix B – Initial Data Capture



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Figure 71 - Farmstead with Multiple BLPUs.

- 6.3 If BLPU Points exist for Parent Records and Child Records and those Records are not all visible on the base mapping, create BPLU Polygons for the Records which are visible on the base mapping and flag the others as ambiguous for the Authority Address Custodian to investigate as part of the second phase of the bulk data capture exercise. Apply the following rules to decide which of the Records to flag as ambiguous:
- If the Child Records are visible on the base mapping, flag the Parent Record as ambiguous for the Authority Address Custodian to investigate in the second phase of the bulk data capture exercise. Create BLPU Polygons for the Child Records.
 - If the Parent Record is visible on the base mapping, flag the Child Records as ambiguous for the Authority Address Custodian to investigate in the second phase of the bulk data capture exercise. Create a BLPU Polygon for the Parent Record.

Appendix C - Business Case

Business Justification

1. Reasons for implementing BLPU Polygons

- 1.1 The LLPG is embedded in most Contributing Authorities' services. This provides efficiency savings and helps to join up services at the authority level, the wider local level and the national level. With the introduction of the Public Sector Mapping Agreement (PSMA) Addressing Datasets, this work will become increasingly important and the data will be relied upon more and more by all PSMA Members.
- 1.2 BLPU Polygons build on the substantial effort which has been made by Contributing Authorities to create a single definitive national dataset for geographic referencing. Using BLPU Polygons ensures that the full value of the LLPG data is realised. Some of the advantages of capturing BLPU Polygons are:
- GIS data management is improved if GIS users across an authority use the same base land and property dataset against which to capture their data.
 - Users and decision makers have confidence in the quality of the data because it is created in a controlled consistent manner as part of the LLPG process. This also means increased confidence in any automated analysis or policy decisions derived from LLPG data in a GIS environment.
 - The need for duplicate copies of land and property data is reduced if authorities create BLPU Polygons centrally and distribute them. This makes it possible to make savings on storage space, staff time and ensures consistency of base information used across an authority.
 - BLPU Polygons can help to improve access to information in the following ways:
 - Internally, to support decision-making processes.
 - Externally, through easier dissemination of information to customers.
 - BLPU Polygons provide the ability to create an electronic corporate data 'warehouse', where Records of historical and new addresses and their extents can be stored, accessible for use at any time.
- 1.3 For those authorities which have not started to capture BLPU Polygons, the business case section provides examples of how the requirement for a corporate GIS and address data strategy is becoming more important as all authorities look for efficiency savings, for example through partnership working and better resource management.
- 1.4 Whilst partial capture of BLPU Polygon extents is useful for specific BLPUs, the case for full capture is also important. If all BLPUs have a BLPU Polygon it is easy to see where data is missing. BLPU Polygons can be used with other forms of spatial analysis to enhance a number of functions in an authority, for example Land Charges searches, Crime Analysis and Planning.

2. Drivers for the Business Case

- 2.1 This section provides the drivers and business benefits that an authority can realise by adding value to their LLPG by creating BLPU Polygons.
- 2.2 For documents describing the benefits which individual authorities have realised through their LLPGs, see the NLPG Exemplar Awards Case Studies (www.iahub.net/docs/1183389671910.pdf) and “It makes life easier A study to evaluate the benefit of the Local and National Land and Property Gazetteers” published by the Centre for Economics and Business Research Ltd in 2006 (www.iahub.net/docs/1183370093241.pdf)
- 2.3 The integrity of GIS data within an authority is improved if polygon data captured by all departments is derived from a definitive data source. This business case relates to the benefits of capturing BLPU Polygons based on a provenance type of inferred 'physical features'.
- 2.4 Some authorities have already captured BLPU Polygons on this basis, and this has helped them to realise the benefits at minimal cost and time, either by using currently available resources or by increasing staffing minimally.
- 2.5 Some departments within a Contributing Authority which will benefit are:
- Building Control.
 - Land Charges.
 - Social Services.
 - Education.
 - Transport.
 - Planning.
 - Economic Development.
- 2.6 Some of the benefits and efficiency savings Local Government can realise by adding value to their existing LLPGs are:
- Within a Contributing Authority, any function which creates GIS data can realise efficiency savings by using BLPU Polygons.
 - Between Local Authorities where partnership working is encouraged or practiced, creating BLPU Polygons could help provide efficiency benefits and savings.
- 2.7 This is achieved by improving information management, dissemination, resourcing and access (for example between County and District Authorities, District and Fire and Police Authorities, Districts and Town and Parish Councils).

3. Drivers for the Users of BLPU Polygon Data

- 3.1 This section seeks to outline the benefits and efficiency savings for Local Authorities and organisations within the Public Sector Mapping Agreement (PSMA).
- 3.2 Within an authority, all service areas could realise efficiency savings by using BLPU Polygons, by releasing back office staff to concentrate on more specialist areas of their job and allowing the front-office to deal with their main priorities.

DEC-BLPU-P

- 3.3 Service areas can use the BLPU Polygon as the basis against which to capture Polygons for their own purposes, for example for a planning application, a land charge search or a building control plot.
- 3.4 Whilst it is not possible to copy the BLPU Polygon in every single case, it is possible for the more straightforward and frequently used BLPUs.
- 3.5 The benefits that can be realised in capturing GIS data in this manner are:
- Accurate data dissemination.
 - Negation of data duplication
 - Confidence in the BLPU Polygon and GIS data.
 - Release of time for other departments to process more applications and to manage the daily duties more efficiently.
- 3.6 This business case is primarily for Contributing Authorities who require a justification for BLPU Polygon capture that fits in with an existing corporate GIS policy. Future BLPU Polygon capture should take into account potential external users. The guidance provided within this business case as a basis upon which to capture future BLPU Polygons helps to 'future proof' data.
- 3.7 Those authorities who see value in implementing this guidance for their entire LLPG holding and have support to do so should implement this guidance to their entire LLPG.
- 3.8 Partnership working is becoming more important throughout local government. Some ways in which BLPU Polygons can help authorities who implement them as part of their GIS strategy are:
- Sharing BLPU Polygons with fire and emergency services to improve hot spot detection and socio economic profiling. This can be done through an extranet facility accessible to all partners.
 - Sharing BLPU Polygons with partner organisations which require BLPU Polygons to enhance applications that rely on 'find my nearest' type searches, for example tourism websites or emergency planning.
- 3.9 Authorities which use BLPU Polygons in partnership projects may need to conduct feasibility studies to help decide if a requirement for 'future proofing' BLPU Polygon data exists and the implications such changes may have on the partnership's use of the data.

4. Drivers for the Creators of BLPU Polygons

- 4.1 Business System Requirements - many authority business systems require the analysis of spatial information relating to land and property. This analysis ranges from relating layers of any information, for example a planning system relating an application to layers of spatial constraints, to relating to a simple spatial attribute, for example an Elections system relating a property to Parish or Ward data.
- 4.2 BLPU Polygons can help with these requirements in the following ways:
- On an ad-hoc basis, for example through the analysis of elections properties and Parish information in a GIS.

DEC-BLPU-P

- On a more permanent basis, for example through the semi-automation of residential planning application registration through the integration of a planning system and a Gazetteer Management System.
- 4.3 Web Based Service Delivery is also helped by BLPU Polygons. Some examples of web based services that may benefit from BLPU Polygons are:
- Planning Expert systems.
 - My Property Account pages.
 - Planning application searches.
- 4.4 Shared Services - the capture of BLPU Polygons using a common infrastructure means that the data can be shared among organisations in local and central government and with other interested parties. BLPU Polygons help with the creation of web services that allow the citizen to find information about land and property in a way that improves that information.
- 4.5 Information Accuracy through centralised Polygon maintenance - BLPU Polygons can be used to ensure all related spatial data is managed centrally which improves accuracy and consistency.
- 4.6 Information Currency - geographic information is often captured and forgotten. By creating and maintaining BLPU Polygons, an organisation can take a structured approach to geographic data management.
- 4.7 Information Maintenance - BLPU Polygons also offer a further dimension to the maintenance of LLPGs, by offering a more structured link to the underlying base map. If changes occur to the base map, these can be identified through spatial queries with more accuracy than point based analysis.
- 4.8 Information Standardisation - Consistency of property based polygons – Many systems use property based polygons to help decision making. If BLPU Polygons exist and are managed as a corporate resource, this ensures property based polygons are consistent. The 'capture once' principle is an excellent example of a consistent approach to polygon management across an authority. If consistent management of polygons is not adopted across an authority, out of date information may be used in decision making. For example the smallest geometric error in a polygon, could return an inaccurate spatial search in a planning system.
- 4.9 Information Standardisation-Removal of Duplication - BLPU Polygons help to remove duplication of spatial data. The polygon information is available for other systems where otherwise the data would be captured separately. Capturing the data separately carries the following risks:
- Duplication of effort.
 - Increased space requirements.
 - Increased maintenance.
 - Replication of data.

DEC-BLPU-P

- Poor quality replication of data. For example, if BLPU Polygons are available for the planning registration process. Many planning application boundaries are the same as the BLPU Polygon. If the BLPU Polygon is copied in these cases, the risk of inaccurate boundaries is removed.

4.10 The main data management principles which are acceptable are:

- Capture Once Principle – means that each polygon is captured once, and referenced to all datasets for use. It follows that if there are identical polygons that would otherwise overlap (for example, blocks of flats) one polygon is held and referenced to each of the overlapping BLPU. This principle has the benefit of reducing the maintenance burden of changing several identical polygons when change occurs. A possible drawback is that most systems do not support the principle.
- Capture and Copy Principle – means that each polygon is held centrally, and available to other systems to copy if required. This principle has the benefits of being available to most GIS systems, and offers a reduction in the capture requirements of other systems, for example, planning registration. A possible drawback is that this might cost more to maintain.
- Capture and Validate on use Principle - offers the ability to perform bulk capture of BLPU Polygons, and make them available to use straight away. This principle means each time a polygon is used, a process exists to validate on use. A possible drawback is that whilst this offers the benefit of bypassing the huge resource requirement of a full polygon validation, it does require a stringent process to be in place to ensure non-validated polygons are not used.

4.11 Data Integration and Sharing - If a gazetteer has BLPU Polygons, there is a link to other spatial data layers. There is also a link to non-spatial data, through a common address, or through the application cross-reference of a gazetteer. This means that linked data can be presented spatially, even if no polygons are drawn. This can be used to improve decision making, or to provide better services, for example to provide automated Land Charges searches.

4.12 Spatial Analysis – Some of the benefits of analysing data using BLPU Polygons are:

- More intelligent systems - It is possible to provide more intelligent business systems by adding spatial extents to information. This enables issues to be highlighted, for example if hotspots are close to each other. BLPU Polygons can also help to automate of previously time consuming tasks, for example through a planning expert system.
- Improved spatial validation of the LLPG - Improved spatial validation is possible if a gazetteer has polygons. For example, it is possible to identify Objects which are not represented by a BLPU Record, or multiple BLPU entries, or duplicate BLPU Records.

DEC-BLPU-P

- Improved Decision Making - BLPU Polygons also allows better decision making through improved systems, and linked data. For example, to analyse what residential properties are within a specific proximity to a planning application site. This kind of analysis cannot be done accurately using point based data.
 - Spatial view of an authority's assets - Linking BLPU Polygons to council owned property or other building asset information enables an authority to establish, monitor and update the true value of its asset holdings. The data is held in one place and is accessible to all users who need access to it. Whilst a resource is required to maintain the information, collating, maintaining and automating the asset register benefits an authority by providing access to accurate, up to date information. This helps authorities make strategic and financial decisions confidently.
 - Simpler property constraints queries - Includes, 'layering' BLPU Polygons for example, conservation area or green belt information on top of each other to ascertain which Local Land Charges (or replies to other enquiries) apply to a parcel of land. This can be done electronically using BLPU Polygons, allowing for quick, efficient and accurate analysis. This releases officer time to do other tasks or process more applications, compared to what would be possible through manual methods such as looking up paper maps, or information held on lists and spreadsheets.
 - Vector Base Map Change Management - BLPU Polygons allow a more structured approach to the management of spatial data, particularly a gazetteer, after changes to the base map. If a change only update is applied to the base map, spatial queries can provide information on base map changes, and the BLPU Polygon data. This may identify areas of accuracy improvements of the base mapping.
- 4.13 Real World Change Management - BLPU Polygons make it easier to identify missing Records. An area of land or property is easy to identify if surrounding BLPU's have polygons. If real-world changes occur it is possible to compare the data before and after base mapping changes to identify areas of inaccuracy in current gazetteers.
- 4.14 Through the analysis of BLPU Polygons and the associated base mapping, it also becomes possible to identify real world changes to the extent of existing properties. This may include splits and merges of properties and land parcels, and new developments within existing BLPU Polygons.
- 4.15 Data Capture - BLPU Polygons allows a more automated capture process to be adopted when dealing with other datasets, such as planning polygons. This is through the common reference of the LPI or application cross referencing, or through shared spatial location. BLPU Polygons do not provide a 100% spatial match to all planning extent polygons, but they are often the same.

DEC-BLPU-P

4.16 New derived datasets can be created using BLPU Polygons. These can then be linked to other business systems. This allows decision makers to visualise data. For example, if BLPU Polygons are used to display Council Tax banding data, then residential BLPUs which are not subject to Council Tax are easy to identify.

5. Benefits

5.1 Opportunities for 'quick wins' include:

- Using a phased approach to implementation, especially if there are specific requirements for the use of BLPU Polygons. This may be at a geographical level, for example on a Parish basis, or on a classification basis, for example all residential properties as priority, followed by commercial premises.
- Using a 'validate on use' approach to capture - rather than one-off full capture of all BLPU Polygon extents – using the validate on use principle, it may be possible to avoid bulk data capture costs, and short term maintenance costs, by creating and validating BLPU Polygons only when required.
- Using existing datasets, for example planning application as input into BLPU Polygon capture. This is largely dependent on the quality of such datasets, but there may be some quick wins to be made by using existing polygon datasets as the basis for BLPU Polygons. For example a planning polygon dataset could form the basis of a capture and validate on use principle.
- Using semi-automated capture. Some suppliers offer automated capture tools that use BLPU Points and base mapping to create property extents using topological rulebases. This approach can be used initially to lead to the 'validate on use' principle.

5.2 BLPU Polygons help to improve the quality of LLPG data. The existence of an Object and its attributes can be validated. Duplicate addresses, for example, LPs with an incorrect building number or easting and northing coordinates can be identified and corrected during the process.

6. Business Impact

6.1 The following items must be taken into account by any authority which decides to create BLPU Polygons:

- Ensure there is publicity which includes:
 - Explaining that BLPU Polygons must not be mistaken for ownership boundaries.
 - Building awareness as to how and when BLPU Polygons should be used.
 - Providing details of an authority's GIS and LLPG team. These teams should give advice on restrictions of the use of BLPU Polygons and how to use BLPU Polygons to meet the requirements of an organisation.

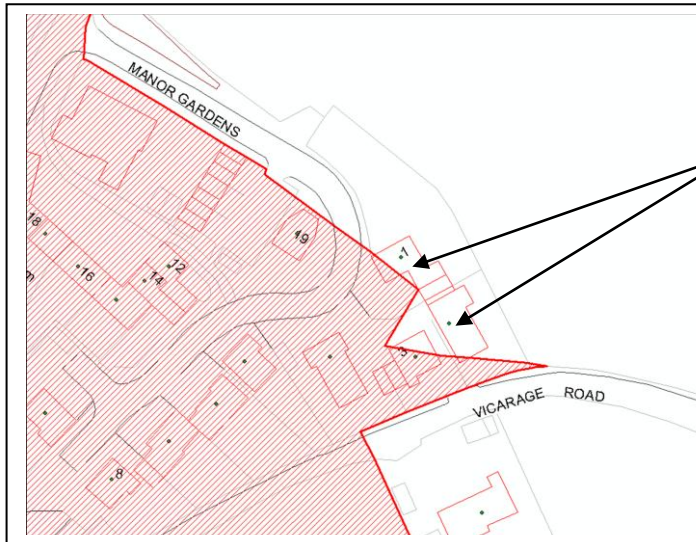
DEC-BLPU-P

- Consider the training needs of users.
 - Consider all users' requirements when creating BLPU Polygons.
 - Ensure that the processes relating to creating BLPU data are extended to include BLPU Polygons.
 - Consider ICT requirements, for example more storage space may be required.
- 6.2 An authority which has not captured BLPU Polygons and does not have a corporate GIS or strategy should consider the benefits realised by other authorities which have included BLPU Polygon capture in their adopted GIS strategy.
- 6.3 The costs and benefits of options for carrying out a bulk data capture exercise should be considered with input from the authority's GIS and Authority Address Custodians. Some options are:
- In-house data capture (in bulk or in stages). If the size of the task is manageable, in-house data capture, and quality assurance of the data to an agreed set of standards may be more cost effective.
 - Tendering for the services of a private GIS data capture organisation. If data is captured in bulk by a private organisation, costs will be incurred and time spent in a quality assurance process, approving the data, and making amendments if the data has been captured wrongly.
- 6.4 Other cost considerations are:
- Upgrading existing software or procuring new software for gazetteer management systems and GIS products.
 - Upgrading existing software or procuring new software to support spatial data transfer.
 - Hardware, software and technical architecture to support increased data holding required for spatial data.
- 6.5 Other issues that could have an impact on authority business, but have not been considered in detail in this business case include:
- Increased user feedback, for example, potential increase in public enquiries over boundaries if BLPU Polygons are published on the Internet.
 - Changes in business processes and policy to accommodate new data sources and data flows, to ensure consistency and currency.

DEC-BLPU-P

7. Use of BLPU Polygons

- 7.1 This Section provides one authority's practical experience of the use of BLPU Polygons.
- 7.2 One common spatial task is finding what constraints affect a property. In the example below, does a property lie within a Conservation Area? If BLPU Points are used to answer this query the potential exists to miss a Conservation area and produce incorrect results.



These properties would be missed by any automated routine as the points fall outside the conservation area. A BLPU Polygon would resolve this issue

- 7.3 Many authorities are realising the benefits of online self-service or expert systems in areas such as planning to provide complex information online rather than via face to face or phone calls. BLPU Polygons can greatly improve the accuracy and usability of these systems by providing customers with predefined search areas rather than relying on BLPU Points or asking the customer to use complicated editing tools to define their own boundary.
- 7.4 The following ROI (return on investment) example outlines the potential savings that can be made by using BLPU Polygons within an expert planning system diverting preliminary enquires (PEs) away from planning officers and onto a self-service web system.

- Number PEs received by authority in 2010 = ~1500
 - Cost of processing PE ~ £60*
 - Assume displaying planning constraint info on a website can reduce PEs by 10%
- Then 150 x 60 = £9,000

Using BLPU Polygons in this one scenario can save in excess of £9,000, which would potentially be sufficient to cover the cost of initial data capture of the BLPU Polygons.

* Conservative estimate

DEC-BLPU-P

- 7.5 Accurate and consistent data capture underpins many applications. BLPU Polygons help this by having a land parcel polygon which is captured once to a high standard and can be used many times across many departments. Currently even though users within an organisation capture data against a common base data, there is still scope for drawing a feature in many different ways because of:
- Poor quality data capture because of incorrect use of data capture tools or insufficient tools.
 - Incomplete base data which means that users have to infer lines.
 - No base data available because of a new development.



- 7.6 In the above example the planning applications have been drawn inconsistently. This gives a poor quality results when undertaking analysis which could have been avoided by using the appropriate BLPU Polygon for each planning application. The use of BLPU Polygons can speed up the data capture process by allowing the user to simply copy and paste the feature and ensured no overlap between adjacent planning applications. These advantages can be applied to all data capture across all layers throughout an organisation.
- 7.7 Another big benefit occurs when capturing data on a new development site where the base data has yet to be drawn. The SNN Officer can draw the BLPU Polygon from the developer's plan and all data capture against this property can then use this BLPU Polygon until the base data is updated. This improves analysis for such things as Land Charges searches because the Land Charges Officer can use the same boundary when doing a property search. This also removes the guess work by trying to plot the search boundary on an area where no base data exists. When the base data is updated it is easier to identify which BLPU Polygons require updating and which business layers require updating.
- 7.8 Reduction in data capture costs.

DEC-BLPU-P

- 7.9 GIS data capture can be a lengthy process. For a department capturing 4,000 – 5,000 planning applications a year that is a lot of time. Approximately ½ of those applications are property based and can be easily captured from BLPU Polygons without having to use complex GIS tools. This can reduce the time taken to capture a householder planning application by about 80% or more.

Assume 5 minutes per householder application

2500 @ 5 mins per application = ~ 208 hours.

2500 @ 1 min per application = ~ 41 hours

Saving of 167 hours / per year in a single department

Similar savings can be achieved across other departments which undertake GIS data capture, for example Land Charges and Building Control, resulting in significant annual savings across an organisation

- 7.10 The use of BLPU Polygons has numerous advantages for an organisation including improved analysis, improved data consistency, reduced data capture costs and the ability to build more function rich websites to reduce the cost of face to face and phone transactions. Like the LLPG itself, creating BLPU Polygons does require an investment but the return on that investment can be quickly realised with discernible quantitative and qualitative benefits across the whole organisation and partner organisations.

8. Conclusion

- 8.1 The members of the GPWG consider that based on their individual experience of capturing and justifying the resources to manage BLPU Polygons in an LLPG that there are at least 25% efficiency savings to be made based on the 'collect once use many' principle alone. For an example of one authority's experience of the practical use of BLPU Polygons, see [Appendix C Section 1.10.4](#).
- 8.1 The GPWP also consider that if the same polygon is held for the same reason or theme but in different systems across an authority, then these efficiency savings could be higher, particularly if the polygons are used in a corporate GIS which links to front and back office systems.

DEC-BLPU-P

Appendix D – Glossary of Terms

Appendix D – Glossary of Terms

Term	Definition
Aerial Photography	A comprehensive set of photographs, taken from the air, during a specified time period and from a uniform height.
BLPU	Basic Land and Property Unit. Represents the geographic location of a real world object recorded within a Local Land and Property gazetteer.
BLPU Polygon	The BLPU Polygon describes a boundary defining a geographical address, within the definitions of BS 7666:2006. The extent of the polygon is identified by physical boundaries. If that information is not available then virtual boundaries inferred from measurements are used and refined through additional information when available. The polygon does not define legal ownership.
BLPU Point	Point feature associated with a BLPU generated from mandatory Easting and Northing attributes of the BLPU record.
BS 7666:2006	An implementation of the British Standard BS 7666:2006 Parts 0, 1 and 2 is used in the compilation of all LLPGs, LSGs and the NLPG and NSG.
Contributing Authority	Local authority responsible for creating and maintaining address (LLPG) and / or street (LSG) records and sending authority updates to the NLPG and NSG.
DEC-BLPU-P	The name of this document.
DEC-NLPG	A document of the Data Entry Conventions and best practice for the NLPG.
DEC-NSG	A document of the Data Entry Conventions and best practice for the NSG.
GPWG	Gazetteers Polygon Working Group.
Imagery	See aerial photography above.
IPR	Intellectual Property Rights.
LGIH	Local Government Information House
LLPG	Local Land and Property Gazetteer.
LLPG Custodian or Authority Address Custodian	Person responsible for the Contributing Authority's LLPG or address data.
LPI	Land and Property Identifier, as defined by BS 7666:2006. The structured text entry that identifies the addressable object of a BLPU.
LSG	Local Street Gazetteer.
Metadata	Information that describes the context, content, quality, condition, origin and structure of records and their management through time, commonly known as "data about data".
NLPG	National Land and Property Gazetteer.
NSG	National Street Gazetteer.
Object	A real world entity which is described by one of the BLPU classifications listed in the DEC-NLPG.
OWPA	Objects without a Postal Address. Object which does not receive mail but is required within an LLPG, for example,

DEC-BLPU-P

Appendix D – Glossary of Terms

	recreation ground, open space, public convenience, church or car park.
PAI	A term used by Ordnance Survey for the Positional Accuracy Improvement of their products.
PAO	Primary Addressable Object, as defined by BS 7666:2006, is the number and / or name given to an addressable object (without reference to another addressable object).
Provenance	Provenance, as defined by BS 7666:2006, is the basis for the existence and extent of a BLPU.
Raster Base Mapping	Source raster image datasets, typically of smaller scale, including but not restricted to, Ordnance Survey® 1:10,000, 1:50,000 etc.
Real World Change	A change that occurs on the ground in the real world.
RPC	Representative Point Code.
SAO	Secondary Addressable Object, as defined by BS 7666:2006, is the number and / or name given to an addressable object that is referenced to another addressable object.
Street BLPU Polygon	The polygon associated with a BLPU with a PAON of Street Record and which reflects the extent of the addressing on a Street.
UPRN	Unique Property Reference Number for a BLPU.
Vector Base Mapping	Source digital vector datasets including, but not restricted to, Ordnance Survey MasterMap®.
Non-real World Change	Changes applied to Vector Base Mapping not as a result of actual changes to mapped features on the ground, but as a result of corrective improvements to the data, including but not limited to the Ordnance Survey® Positional Accuracy Improvement programme ('PAI' was a national programme undertaken to increase the absolute accuracy of Vector Base Map data in order to provide an improved and more consistent accuracy standard of mapping data.)