

## **Mapping methodology and sources**

Table 1 below provides the detail on methodology and sources to supplement the summary of mapping methodology in Chapter 2 and the individual GIS maps illustrating the case studies and other chapters and appendices.

### ***Note on identifying Cistercian land on tithe maps***

Land cultivated by the Cistercians before the fourth Lateran Council of 1215 and any in Cistercian hands first farmed by them after this date were exempt from tithe payments (Davies 1953, 103). This privilege endured into modern times and is often confirmed on an individual field basis in the tithe maps and apportionment schedules of the mid-nineteenth century. In addition, some Cistercian lands are indicated as extra-parochial blocks outside the main estate but apart from the surrounding parish (Williams, 1990, 21). David Williams (1990; 2001) has used this tithe data and other historic sources to map the estates of the Cistercian houses of Wales at a relatively small scale (using Ordnance Survey quarter inch to one mile base maps). This mapping, historic maps and other evidence have been used as a base-line for the boundaries of Llantarnam and Tintern territory used in this study and the larger scale maps drawn using GIS.

### ***Note on medieval landscape and land-use maps***

The medieval landscape and land-use maps are a best guess postulation based on available evidence and back-projecting based on later data, as detailed for the individual maps below. It is therefore conceivable, and in some cases perhaps likely, that, for instance, the exact boundaries of estate lands and land-use and other landscape features differed somewhat in reality.

**Table 1: GIS map list**

Map name	Thesis chapter (figure number)	Base map layer	Sources
Boundary of the study area - UK	3 (3.1)	Ordnance Survey Open Raster	
Boundary of the study area - region	3 (3.2)	Ordnance Survey Open Carto 2 and ArcGIS World Imagery	1:5000 Historic Counties data layer added
Geology of the study area	3 (3.6)	British Geological Survey	1:5000 Historic Counties data layer added
Physical geography and landscape <i>pays</i> in the study area	3 (3.7)	ArcGIS World Imagery	1:5000 Historic Counties data layer added
Distribution of monastic houses in the study area	4 (4.3)	Ordnance Survey 1:25,000 Scale Open Carto 2	1:5000 Historic Counties data layer added
Llanthony - location	5 (5.2)	Ordnance Survey Open Carto 2	1:5000 Historic Counties data layer added
Llanthony - medieval landscape context	5 (5.3)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887 and Ordnance Survey 1:25,000 Scale Colour Raster	Partly informed by Rees (1932, 1972)
Llanthony – composite landscape walk	5 (5.4)	ArcGIS World Imagery	

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Map name	Thesis chapter (figure number)	Base map layer	Sources
Llanthony - distribution of estates and holdings	5 (5.8)	Ordnance Survey 1:25,000 Scale Colour Raster	Taxatio Ecclesiastica (1291), Valor Ecclesiasticus (1535), Minsters Accounts (1536/7); Robinson (1980a, 1980b)  1:5000 Historic Counties data layer added
Llanthony - postulated landscape and land-use c. 1300	5 (5.15)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	<p>Estate boundaries – informed by:            Descriptions in land grant charters (Atkyns and Smith 1974; Austin 2014; Carpenter 2013; <i>Monasticon</i>, Dugdale <i>et al</i> 1846)            Survey of the bounds of Cwmyoy manor (1612) (NLW, Cardiff Central Library MS 5.15)            Cwmyoy (Upper and Lower Divisions) Map No. 1 and Map No. 2 Tithe Maps (1852)            Llanfihangel Crucorney Tithe Map (1848)            Oldcastle Tithe Map (1839)            Civil parish boundaries on Ordnance Survey 1:10560 County Series 1<sup>st</sup> edition maps, Monmouthshire (1887)</p> <p>Farmsteads – those for which the farmhouse is recorded as having fifteenth or sixteenth century fabric and potential earlier origin in the HER or other secondary sources, mentioned in primary documentary evidence (e.g. Dissolution survey, manorial court books and surveys) and secondary sources or suggested as of medieval or earlier origin through field observation and map, aerial photography and satellite image analysis.</p>

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>Farmstead closes and arable land – analysis of areas of small, irregular fields around the identified farmsteads and arable land or estimate of the likely extent, based on the Ordnance Survey base map field morphology and tithe map field boundaries and land-use data; supplemented by references to arable or demesne land and closes in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Floodland meadows – estimated extent based on areas of enclosures recorded as meadows on the tithe maps and the Ordnance Survey base map field morphology; supplemented by references to meadows in primary documentary evidence and secondary sources, field name-evidence, aerial photography, satellite image analysis and field observation.</p> <p>Wood pasture - estimated extent based on areas of enclosures recorded as pasture on the tithe maps and the Ordnance Survey base map field morphology; supplemented by references to wood pasture or common pasture in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p>

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>Woodland – estimated extend based on woodland recorded on the tithe maps and the Ordnance Survey base map; supplemented by references to woodland, wood-based resources and rights and responsibilities in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Upland common grazing – estimated extent based on common grazing and waste recorded on the tithe maps and the Ordnance Survey base map, taking account of areas of probable later encroachment; supplemented by references to common grazing and waste in the earliest documentary evidence, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Roadways – main routeways recorded on the Ordnance Survey base map and tithe maps, taking account of known or probably later roads; supplemented by references to roads, routeways and tracks in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Churches – recorded as possessions of the priory.</p>

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			Mills – recorded as possessions of the priory with actual location based on the Ordnance Survey base map and tithe maps; supplemented by references to mills in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.
Llanthony – priory precinct and surrounding monastic landscape	5 (5.17)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Partly informed by Evans (1980, 1984) and Procter (2007a, 2014a)
Llanthony – medieval routeways	5 (5.38)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887 and Ordnance Survey 1:25,000 Scale Colour Raster	Based on main routeways recorded on the Ordnance Survey base map, Budgen (1814), Old Series (1832) and tithe maps, taking account of known or probably later roads; supplemented by references to roads, routeways and tracks in primary documentary evidence and secondary sources, field-name evidence Informed by field observation, aerial photography, satellite image analysis and field observation.
Llanthony – Cwmyoy manor (south and north) mid-19 <sup>th</sup> c. landscape	6 (6.2 and 6.3)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Field polygons drawn from the Cwmyoy (Upper and Lower Divisions) Map No. 1 and Map No. 2 Tithe Maps (1852) with land-use added from the tithe apportionment schedules accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.

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Map name	Thesis chapter (figure number)	Base map layer	Sources
Llanthony – Oldcastle manor mid-19 <sup>th</sup> c. landscape	6 (6.4)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Field polygons drawn from the Oldcastle Tithe Map (1839) with land-use added from the tithe apportionment schedules accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.
Llanthony – Redcastle manor mid-19 <sup>th</sup> c. landscape	6 (6.5)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Field polygons drawn from the Cwmyoy (Lower Division) Map No. 2 Tithe Map (1852) with land-use added from the tithe apportionment schedules accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.
Llanthony – Stanton manor mid-19 <sup>th</sup> c. landscape	6 (6.6)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Field polygons drawn from the Llanfihangel Crucorney Tithe Maps (1848) with land-use added from the tithe apportionment schedules accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.
Llanthony – Purcas field names	6 (6.10)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> revision, Monmouthshire, 1903	Field names and polygons drawn from the Cwmyoy (Lower Division) Map No. 2 Tithe Map (1852)
Llanthony - Landor landscape features	6 (6.22)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by the tithe maps and Ordnance Survey base map; supplemented by references to Landor's estate management in primary documentary evidence and secondary sources, field-name evidence, aerial

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			photography, satellite image analysis and field observation.
Tintern - location	7 (7.2)	Ordnance Survey Open Carto 2	1:5000 Historic Counties data layer added
Tintern - medieval landscape context	7 (7.3)	Ordnance Survey 1:25,000 Scale Colour Raster Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887 and Gloucestershire, 1889	Partly informed by Rees (1932, 1972), Williams (1990, 2001) Manor boundaries informed by*: Duke of Beaufort Porthcasseg Manor Estate Map (1763) Tidenham (Woolaston and Launcaut) Inclosure Map (1815) Hewelsfield Tithe Map (1841) Penterry Tithe Map (1844) St. Arvans Tithe Map (1845) Tidenham Tithe Map (1845) Woolaston Tithe Map (1838) Civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887) and Gloucestershire (1889)  * Duke of Beaufort Tidenham and Woolaston Manor Estate Map (1769) not available to the public
Tintern – composite landscape walks	7 (7.4)	ArcGIS World Imagery	
Tintern - distribution of estates and holdings in	7 (7.10)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition,	Redrawn from Robinson (2011) and Williams (1990, 2001) with detail of estate boundaries informed by:



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Map name	Thesis chapter (figure number)	Base map layer	Sources
Gloucestershire and Monmouthshire		Monmouthshire, 1887 and Gloucestershire, 1889	Duke of Beaufort Porthcasseg Manor Estate Map (1763) Duke of Beaufort Trelleck Grange Manor Estate Map (1765) Tidenham (Woolaston and Launcaut) Inclosure Map (1815) Hewelsfield Tithe Map (1841) Penterry Tithe Map (1844) St. Arvans Tithe Map (1845) Tidenham Tithe Map (1845) Woolaston Tithe Map (1838) Civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887) and Gloucestershire (1889) and descriptions in land grant charters ( <i>Cal Ch</i> , PRO 1908; Heath 1806), <i>Taxatio Ecclesiastica</i> (1291), <i>Valor Ecclesiasticus</i> (1535), <i>Minsters Accounts</i> (1536/7)
Tintern – land units in case study area	7 (7.14)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887 and Gloucestershire, 1889	Estate boundaries – informed by*: Williams (1990, 2001) Duke of Beaufort Porthcasseg Manor Estate Map (1763) Tidenham (Woolaston and Launcaut) Inclosure Map (1815) Hewelsfield Tithe Map (1841) Penterry Tithe Map (1844) St. Arvans Tithe Map (1845) Tidenham Tithe Map (1845) Woolaston Tithe Map (1838)

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>Civil parish boundaries on Ordnance Survey 1:10560 County Series 1<sup>st</sup> edition maps, Monmouthshire (1887) and Gloucestershire (1889) and descriptions in land grant charters (<i>Cal Ch</i>, PRO 1908; Heath 1806)</p> <p>* Duke of Beaufort Tidenham and Woolaston Manor Estate Map (1769) not available to the public</p>
Tintern - postulated landscape and land-use c. 1300	7 (7.24)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887 and Gloucestershire, 1889	<p>Estate and grange boundaries – informed by*:  Williams (1990, 2001)  Duke of Beaufort Porthcasseg Manor Estate Map (1763)  Tidenham (Woolaston and Launcaut) Inclosure Map (1815)  Hewelsfield Tithe Map (1841)  Penterry Tithe Map (1844)  St. Arvans Tithe Map (1845)  Tidenham Tithe Map (1845)  Woolaston Tithe Map (1838)  Civil parish boundaries on Ordnance Survey 1:10560 County Series 1<sup>st</sup> edition maps, Monmouthshire (1887) and Gloucestershire (1889) and descriptions in land grant charters (<i>Cal Ch</i>, PRO 1908; Heath 1806)</p> <p>* Duke of Beaufort Tidenham and Woolaston Manor Estate Map (1769) not available to the public</p>

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			<p>Farmsteads – those for which the farmhouse is recorded as having fifteenth or sixteenth century fabric and potential earlier origin in the HER or other secondary sources, mentioned in primary documentary evidence (e.g. Dissolution survey, manorial court books and surveys) and secondary sources or suggested as of medieval or earlier origin through field observation and map, aerial photography and satellite image analysis.</p> <p>Farmstead closes and arable land – analysis of areas of small, irregular fields around the identified farmsteads and arable land or estimate of the likely extent, based on Ordnance Survey base map field morphology, estate, enclosure and tithe map field boundaries and land-use data and Forest of Dean and Wye HLCs; supplemented by references to arable or demesne land and closes in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Floodland meadows – estimated extent based on areas of enclosures recorded as meadows on the estate, enclosure and tithe maps, Ordnance Survey base map field morphology and Forest of Dean and Wye HLCs; supplemented by references to meadows in primary</p>

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			<p>documentary evidence and secondary sources, field name-evidence, aerial photography, satellite image analysis and field observation.</p> <p>Wood pasture - estimated extent based on areas of enclosures recorded as pasture on the estate, enclosure and tithe maps, Ordnance Survey base map field morphology and Forest of Dean and Wye HLCs; supplemented by references to wood pasture or common pasture in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Woodland – estimated extend based on woodland recorded on the Ordnance Survey base map, estate, enclosure and tithe maps and Forest of Dean and Wye HLCs; supplemented by references to woodland, wood-based resources and rights and responsibilities in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Roadways – main routeways recorded on the Ordnance Survey base map, estate, enclosure and tithe maps and Forest of Dean and Wye HLCs, taking account of known or probably later roads; supplemented by references to roads, routeways and tracks in primary documentary</p>

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Churches – recorded as possessions of the abbey.</p> <p>Mills – recorded as possessions of the abbey with actual location based on the Ordnance Survey base map and estate, enclosure and tithe maps; supplemented by references to mills in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p>
Tintern - abbey precinct and surrounding monastic landscape	7 (7.26)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Partly informed by Robinson (2011) and Williams (1990, 2001) and Duke of Beaufort Porthcasseg Manor Estate Map (1763).
Tintern – Topographical plan of the earthwork features around Modesgate grange	7 (7.32)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Gloucestershire, 1889 and 1:25,000 Scale Colour Raster	Informed by field observation and measured survey, aerial photography and satellite image analysis Tidenham (Woolaston and Launcaut) Inclosure Map (1815), Woolaston Tithe Map (1838), Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition Gloucestershire Map (1889), Small and Stoertz 2006.
Tintern – old boundary walls	7 (7.43)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by field observation, aerial photography and satellite image analysis Duke of Beaufort Porthcasseg Manor Estate Map (1763)

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Map name	Thesis chapter (figure number)	Base map layer	Sources
		and Gloucestershire, 1889	Tidenham (Woolaston and Launcaut) Inclosure Map (1815) Hewelsfield Tithe Map (1841) Penterry Tithe Map (1844) St. Arvans Tithe Map (1845) Tidenham Tithe Map (1845) Woolaston Tithe Map (1838) Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887) and Gloucestershire (1889)
Tintern – Wye fisheries	7 (7.52)	Ordnance Survey 1:25,000 Scale Colour Raster	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887) and Gloucestershire (1889).
Tintern – Minepit Wood	7 (7.54)	LiDAR 2m DTM	Informed by field observation, satellite imagery and Duke of Beaufort Porthcasseg Manor Estate Map (1763).
Tintern – medieval routeways	7 (7.56)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887 and Gloucestershire, 1889	Based on main routeways recorded on the Ordnance Survey base map, estate, enclosure and tithe maps, taking account of known or probably later roads; supplemented by references to roads, routeways and tracks in primary documentary evidence and secondary sources, field-name evidence Informed by field observation, aerial photography, satellite image analysis and field observation.
Tintern – Porthcasseg late-18 <sup>th</sup> c. landscape	8 (8.4)	Ordnance Survey 1:10560 County Series	Field polygons drawn from the Duke of Beaufort Porthcasseg Manor Estate Map (1763), Penterry Tithe

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Map name	Thesis chapter (figure number)	Base map layer	Sources
		1 <sup>st</sup> edition, Monmouthshire, 1887	Map (1844) and St. Arvans Tithe Map (1845) with land-use added from the tables and tithe apportionment schedule accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.
Tintern – Brockweir and Modesgate mid-19 <sup>th</sup> c. landscape	8 (8.5)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Gloucestershire, 1889	Field polygons drawn from the Tidenham (Woolaston and Launcaut) Inclosure Map (1815) and Woolaston Tithe Map (1838) with land-use added from the tithe apportionment schedule accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.  (Duke of Beaufort Tidenham and Woolaston Manor Estate Map (1769) not available to the public)
Llantarnam - location	9 (9.2)	Ordnance Survey Open Carto 2	1:5000 Historic Counties data layer added
Llantarnam - medieval landscape context	9 (9.3)	Ordnance Survey 1:25,000 Scale Colour Raster	Informed by Rees (1932, 1972), Gray (1998), Williams (1990, 2001) Manor boundaries informed by: Magna Porta Manor Survey (1634) Llantarnam Abbey Estate Map (1799) Henllis Tithe Map (1842) Llanfihangel Llantarnam Tithe Map (1846) Llanvrechva Upper Tithe Map (1840) Llangattock-juxta-Caerleon Tithe Map (1840) Mynyddislwyn Tithe Map (1846)

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>The boundaries of the Magna Porta manor have been interpreted from the above as largely the same as the Llanfihangel Llantarnam civil parish, excluding the lands of Redcastle manor. The parish boundary was validated in particular by the 1634 manor survey and 1799 estate map, although neither was a definitive source. For instance, the 1634 survey indicated that the manor may have included additional land to the north in Llanfrechfa parish but this has not been definitively proven and not therefore included in the case study area; by the time of the 1799 survey, the old Llantarnam Abbey estate had already been begun to be broken up with former monastic land now excluded.</p>
Llantarnam – composite landscape walks	9 (9.4)	ArcGIS World Imagery	
Llantarnam- distribution of estates and holdings	9 (9.8)	Ordnance Survey 1:25,000 Scale Colour Raster	<p>Informed by Taxatio Ecclesiastica (1291), Valor Ecclesiasticus (1535), Minsters Accounts (1536/7); Gray (1998), Williams (1990, 2001) and other secondary sources relating to the location of abbey holdings.</p> <p>1:5000 Historic Counties data layer added</p>
Llantarnam - postulated landscape and land-use c. 1300	9 (9.23)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	<p>Estate and grange boundaries – informed by: Gray (1998), Williams (1990, 2001) Magna Porta Manor Survey (1634) Llantarnam Abbey Estate Map (1799) Henllis Tithe Map (1842) Llanfihangel Llantarnam Tithe Map (1846)</p>



Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>Llanvrechva Upper Tithe Map (1840)  Llangattock-juxta-Caerleon Tithe Map (1840)  Mynyddislwyn Tithe Map (1846)  Llantarnam Estate Sale Plan (1885)  Civil parish boundaries on Ordnance Survey 1:10560 County Series 1<sup>st</sup> edition maps, Monmouthshire (1887) and Gloucestershire (1889)</p> <p>Farmsteads – those for which the farmhouse is recorded as having fifteenth or sixteenth century fabric and potential earlier origin in the HER or other secondary sources, mentioned in primary documentary evidence (e.g. Dissolution survey, manorial court books and surveys) and secondary sources or suggested as of medieval or earlier origin through field observation and map, aerial photography and satellite image analysis.</p> <p>Farmstead closes and arable land – analysis of areas of small, irregular fields around the identified farmsteads and arable land or estimate of the likely extent, based on Ordnance Survey base map field morphology, estate and tithe map field boundaries and land-use data; supplemented by references to arable or demesne land and closes in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p>

Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>Floodland meadows – estimated extent based on areas of enclosures recorded as meadows on the estate and tithe maps, Ordnance Survey base map field morphology; supplemented by references to meadows in primary documentary evidence and secondary sources, field name-evidence, aerial photography, satellite image analysis and field observation.</p> <p>Wood pasture - estimated extent based on areas of enclosures recorded as pasture on the estate and tithe maps, Ordnance Survey base map field morphology; supplemented by references to wood pasture or common pasture in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Woodland – estimated extend based on woodland recorded on the Ordnance Survey base map, estate and tithe maps; supplemented by references to woodland, wood-based resources and rights and responsibilities in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Roadways – main routeways recorded on the Ordnance Survey base map, estate, and tithe maps, taking</p>

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			<p>account of known or probably later roads; supplemented by references to roads, routeways and tracks in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p> <p>Churches – recorded as possessions of the abbey.</p> <p>Mills – recorded as possessions of the abbey with actual location based on the Ordnance Survey base map and estate, enclosure and tithe maps; supplemented by references to mills in primary documentary evidence and secondary sources, field-name evidence, aerial photography, satellite image analysis and field observation.</p>
Llantarnam – abbey precinct and surrounding monastic landscape	9 (9.24)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Partly informed by Williams (1990, 2001) and Llantarnam Abbey Estate Map (1799), other secondary sources, aerial photography, satellite image analysis and field observation.
Llantarnam - Postulated extent of Abbot's Park and Kings Park, Caerleon	9 (9.30)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by field observation, aerial photography, satellite image analysis, Yates (1998) Llantarnam Abbey Estate Map (1799) Llanfihangel Llantarnam Tithe Map (1846) Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887

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Map name	Thesis chapter (figure number)	Base map layer	Sources
Llantarnam - possible grange enclosures at Cefn-mynach	9 (9.43)	LiDAR 1M DSM	Informed by field observation, aerial photography, satellite image analysis Llantarnam Abbey Estate Map (1799) Llanfihangel Llantarnam Tithe Map (1846) Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887
Llantarnam – medieval routeways	9 (9.57)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Based on main routeways recorded on the Ordnance Survey base map, estate and tithe maps, taking account of known or probably later roads; supplemented by references to roads, routeways and tracks in primary documentary evidence and secondary sources, field-name evidence Informed by field observation, aerial photography, satellite image analysis and field observation.
Llantarnam - the pilgrims route to running through the townscape of Cwmbrân to Llanderfel via St. Dials	9 (9.59)	LiDAR 1M DSM	Informed by field observation, aerial photography, satellite image analysis, Gray (1997b), Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887.
Llantarnam – Rhyswg mid-19 <sup>th</sup> c. landscape	10 (10.4)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Field polygons drawn from the Mynyddislwyn Tithe Map (1838) with land-use added from the tables and tithe apportionment schedule accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.
Llantarnam – Magna Porta mid-19 <sup>th</sup> c. landscape (southern)	10 (10.5)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Field polygons drawn from the Henllis Tithe Map (1842), Llanfihangel Llantarnam Tithe Map (1846) and Llangattock-juxta-Caerleon Tithe Map (1840)

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Map name	Thesis chapter (figure number)	Base map layer	Sources
			with land-use added from the tithe apportionment schedule accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.
Llantarnam – Magna Porta mid-19 <sup>th</sup> c. landscape (northern)	10 (10.6)	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Field polygons drawn from the Henllis Tithe Map (1842), Llanfihangel Llantarnam Tithe Map (1846) and Llangattock-juxta-Caerleon Tithe Map (1840) with land-use added from the tithe apportionment schedule accompanying the maps and farmsteads, roads and other features drawn from the Ordnance Survey base map.
Llantarnam - The boundaries of the Magna Porta manor, abbey granges and postulated land-use circa 1300, superimposed onto a modern map of the urban area of Cwmbrân	10 (10.25)	Ordnance Survey Open Carto	Data from map at Figure 9.26.
Tintern - Aluredston grange	App 5	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Gloucestershire, 1889	Informed by Williams (1990), Woolaston Tithe Map (1838) and civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Gloucestershire (1889).
Tintern – Halishall and Woolaston granges	App 5	Ordnance Survey 1:10560 County Series	Informed by Williams (1990), Tidenham Tithe Map (1845), Woolaston Tithe Map (1838) and civil parish

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		1 <sup>st</sup> edition, Gloucestershire, 1889	boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Gloucestershire (1889).
Tintern – Hartshill	App 5	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Gloucestershire, 1889	Postulated based on civil parish boundaries and field patterns on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Gloucestershire (1889).
Tintern - Merthyrgeryn grange	App 5	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by Williams (1990, 2001) and civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887).
Tintern – Moor/ New granges	App 5	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by Williams (1990) and civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887).
Tintern - Pethlenny grange	App 5	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by Williams (1990) and civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887).
Tintern – Rogerstone grange	App 5	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by Williams (1990, 2001), Duke of Beaufort Porthcasseg Manor Estate Map (1763) and civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887).
Tintern – Trelleck grange	App 5	Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition, Monmouthshire, 1887	Informed by Williams (1990), Duke of Beaufort Trelleck Grange Manor Estate Map (1765) and civil parish boundaries on Ordnance Survey 1:10560 County Series 1 <sup>st</sup> edition maps, Monmouthshire (1887).

## Appendix 2

Map name	Thesis chapter (figure number)	Base map layer	Sources
Llantarnam – Cwmbrân landscape walk	11 (11.1) and App 6	ArcGIS World Imagery	
Llantarnam – Abbey landscape walk	App 6	ArcGIS World Imagery	
Llantarnam – Mynydd Maen landscape walk	4 (4.1) and App 6	ArcGIS World Imagery	
Llanthony - Cwmyoy boundary and Redcastle landscape walk	App 6	ArcGIS World Imagery	
Llanthony - Cwmyoy south landscape walk	App 6	ArcGIS World Imagery	
Llanthony - Cwmyoy north landscape walk	App 6	ArcGIS World Imagery	
Llanthony - Longtown landscape walk	11 (11.2) and App 6	ArcGIS World Imagery	
Llanthony - Oldcastle and Stanton landscape walk	App 6	ArcGIS World Imagery	
Llanthony - Landor landscape features walk	App 6	ArcGIS World Imagery	
Tintern - Angidy valley landscape walk	App 6	ArcGIS World Imagery	
Tintern - Porthcasseg landscape walk	App 6	ArcGIS World Imagery	
Tintern - Stony Way to Rogerstone landscape walk	App 6	ArcGIS World Imagery	
Tintern - Wye granges east landscape walk	App 6	ArcGIS World Imagery	