

ORDNANCE SURVEY PUBLIC TASK

ORDNANCE SURVEY: OPERATING PRINCIPLES

Ordnance Survey is an independent non-Ministerial government department and Executive Agency. It operates as a trading fund under the terms of the Government Trading Funds Act 1973 and The Ordnance Survey Trading Fund Order 1999. It is responsible to the Secretary of State for Communities and Local Government.

Ordnance Survey creates, maintains and distributes geospatial and cartographic data and products relating to Great Britain in the nation's interest. This paper sets out Ordnance Survey's Public Task.

PUBLIC TASK

Ordnance Survey's Public Task is to:

- Collect and maintain uniform datasets with national coverage forming the official record of the natural and built environment of Great Britain, containing:
 - detailed mapping of the built and natural landscape (topography);⁸⁶
 - high resolution address data;
 - transport networks (including road, rail, waterways, tracks and paths);
 - terrain and height data;
 - administrative and electoral boundary information; and
 - geographical names (including features with imprecise extents such as “Dartmoor”, “The Cotswolds”, “Forest of Bowland”, “South Downs” etc).
- Provide a nationally consistent cartographic portrayal of the topography of Great Britain at various scales including large scales.
- Maintain a definitive three-dimensional satellite-based geodetic⁸⁷ reference framework of Great Britain that underpins the national datasets and facilitates the integration and analysis of location-based information from many sources.
- Make the content of the datasets widely available in forms that are accessible to customers of all types for wider benefit. This will be in the form of products which are the direct output of those datasets. As part of its Public Task and in order to fulfil its trading fund obligations, Ordnance Survey will charge all customers for the licensing and use of its products.
- Conduct its activities efficiently and effectively to maximise the broader economic value of its data, whilst complying with trading fund requirements.
- Ensure that its data is capable of supporting the principles underlying the Digital National Framework in underpinning the association and integration of third party geospatial information.

In order to fulfil its Public Task, Ordnance Survey is required to collect and maintain topographic data at the following scales:

- | | |
|---|----------|
| — High Change Geographies ⁸⁸ : | 1:1250 |
| — Rural Areas ⁸⁹ : | 1:2500 |
| — National cover: | 1:10000 |
| | 1:25000 |
| | 1:50000 |
| | 1:250000 |

The above datasets are required to fulfil Ordnance Survey's Public Task to ensure that a comprehensive, nationally consistent version of each exists in the public interest. Annex 1A sets out:

- Ordnance Survey's datasets which fulfil its Public Task;

⁸⁶ Topography: Including defining the surface shape and composition of the landscape, comprising both natural and artificial features.

⁸⁷ Geodetic: Relating to the scientific discipline that deals with the precise measurement and representation of the earth, its gravitational field, and other related phenomena. Within Ordnance Survey geodetic-quality information forms the high precision framework that ensures the correct positioning of all mapping and other data against the National Grid.

⁸⁸ Predominantly urban areas and areas of significant development.

⁸⁹ Predominantly rural settlements and developed agricultural land.

- the products that are currently the direct output of those datasets; and
- the rationale for including the various data within the Public Task.

The minimum levels of accuracy and revision required for those datasets are at Annex 1B.

The referencing systems and data collected and maintained by Ordnance Survey contribute to the development and integration of geographic and location based information collected and used by government, business and individuals.

As the National Mapping Agency of Great Britain, Ordnance Survey represents Great Britain overseas as experts on Survey, Mapping and Geographic Information. It provides a focus for the provision of public sector information into pan-European and international collaboration by National Mapping Agencies and the European Directive on the Infrastructure for Spatial Information in Europe (INSPIRE).

In discharging its Public Task, Ordnance Survey:

- Seeks to maximise both the accessibility of, and the broader economic benefit arising from the use of the data. It therefore creates products directly from these datasets and makes them available, including through commercial licensing, to government and business customers and consumers.
- Takes into account the views of customers (as well as, inter alia, technological changes and its trading fund requirements) to ensure that the range and content of these products meets their changing needs, and makes changes to content, accuracy and revision policies as may be necessary to ensure that the datasets and products remain fit for purpose. This may result in adding or withdrawing products from availability from time to time, as well as enhancing content and functionality.

FUNDING

Under The Ordnance Survey Trading Fund Order 1999, Ordnance Survey is required to fund all of its operations from its trading revenue so that the revenue is sufficient, taking one year with another, to meet outgoings and any further financial objectives required by HM Treasury. The HM Treasury requirement for the period 1 April 2007 to 31 March 2010 is, over the period taken as a whole, for a return on capital employed of at least [. . .]

Government does not provide any direct funding by way of grant payments for the delivery of Ordnance Survey's Public Task, and Ordnance Survey is required to meet its financial obligations as a trading fund from the income generated by its activities, including its Public Task activities. Ordnance Survey may also, but is not required to, engage in non-public task activities. To the extent that it does so, these activities will also contribute to Ordnance Survey's trading fund obligations.

ACCESS TO DATA

Ordnance Survey provides access to its data and products on a basis which first, enables it to deliver its Public Task and second, maximises the broader economic value of the information it holds. Data from the datasets forming the Public Task are made available to customers at the earliest stage of production consistent with the ability for Ordnance Survey to generate sufficient revenue to meet its Trading Fund requirements in delivering its Public Task. With ongoing investment in its technology infrastructure, Ordnance Survey may, in future, be able to increase the granularity for customers to obtain thematic subsets of the datasets within its public task.

PRICING

Comment: This section is subject to the outcome of ongoing discussion with OFT. At this stage it seems clear that OFT's concept of "unrefined" and "refined" data cannot be directly matched to the Public Task outlined above. If there is inconsistency then the pricing model may be inconsistent with either the OFT view or the Public Task approach outlined below. Assuming agreement in due course there will need to be a period of transition to the new arrangements as in either case internal charging arrangements, new cost allocation processes and some form of accounting separation will need to be implemented.

Those products and datasets required to deliver the Public Task will, overall, be priced to cover the costs associated with the datasets and products, including investment costs, a share of corporate costs and the agreed rate of return. At the level of individual products and datasets, differential pricing is used.

Those products which fall outside the Public Task will be priced at market rates to at least cover the costs associated with the creation and distribution of the datasets and products, including investment costs, a share of corporate costs and the agreed rate of return taken as a whole across all such datasets and products. Where the product uses Public Task data, it will access that data at the same price and on the same terms as any third party.

In all cases, appropriate pricing and discount structures will be applied to reflect the level and extent of usage.

LICENSING

This section may also be impacted by the outcome of discussions with OFT

Ordnance Survey information is subject to Crown Copyright and Crown database rights. Ordnance Survey has delegated authority from the Controller of Her Majesty's Stationery Office to manage these Crown rights in its information on a day to day basis.

Ordnance Survey will operate a licensing system, consistent with the foregoing paragraphs, which enables it to deliver its Public Task and maximises the broader economic value of its data.

In operating its licensing system Ordnance Survey is committed to the principles of the OPSI Information Fair Trader Scheme.

CHANGES TO THE DEFINITION OF PUBLIC TASK

The practicalities of implementation, amendment and review of the definition of the Ordnance Survey Public Task will be worked out separately.

Annex 1A

DATASETS AND PRODUCTS WITHIN THE PUBLIC TASK

The datasets listed here are those required to fulfil the Ordnance Survey's Public Task. The "Public Task" rationale for each dataset is given, together with the products by which Ordnance Survey currently disseminates the datasets to customers of all types. Taken together the datasets and products form an integrated portfolio providing a framework of nationally consistent, authoritative and correlated geographic information from the detailed individual property level to the strategic regional and national overview.

<i>Public Task Dataset</i>	<i>Statement of significance with respect to Public Task</i>	<i>Products currently produced from the Dataset</i>
National Geographic Database (NGD) <ul style="list-style-type: none"> — 1:1250—high change areas — 1:2500—rural geography — 1:10,000—national cover 	<p>The data critically underpins essential core public sector functions concerned with:</p> <ul style="list-style-type: none"> — Land and infrastructure development, management, exploitation and land registration; — Local and national governance and democratic process; — Sustainable communities, national security, border controls and law enforcement; — Environmental and built heritage conservation legislation, planning, and control. <p>It also provides a consistent national framework for a wide range of private sector business associated with the ownership and exploitation of Land and Property assets.</p> <p>The database is populated directly from surveys at the three 'basic scales' and contains the core topographic content and unique identifiers forming the only nationally consistent, fully maintained and authoritative large scale topographic data available for the whole of Great Britain.</p>	<p>OS MasterMap® Topography Layer; Land-Line® Land-Line.Plus® OS Sitemap®</p> <p>Note: OS MasterMap Topography layer has a richer specification, data structure and content than Land-Line, including unique feature identifiers (TOIDs), allowing the product to support greater functionality within user applications than Land-Line which represents the previous generation of product specification and structure.</p>
ROADS Database	<p>The data underpins critical public and private sector functions associated with:</p> <ul style="list-style-type: none"> — National/regional transport policy and planning and traffic management; — Routing and navigation including in-vehicle systems and street-level mapping; 	OS MasterMap® Integrated Transport Network layer

<i>Public Task Dataset</i>	<i>Statement of significance with respect to Public Task</i>	<i>Products currently produced from the Dataset</i>
	<ul style="list-style-type: none"> — Vehicle tracking, command and control and civil contingency/emergency services response co-ordination; — Highways infrastructure, gazetteers and street-works. <p>Populated directly from NGD and containing authoritative, geometrically precise and nationally consistent large scales communications (road, track and path) network data together with road access, height and weight restriction attributes for all of Great Britain.</p>	
ADDRESS-POINT Central Management System	<p>The data underpins core public sector functions concerned with address location in:</p> <ul style="list-style-type: none"> — Local and national governance and democratic process; — National security, border controls and law enforcement; — Land and property location and identification—gazetteers and indexes; — Environmental and built heritage conservation legislation, planning, and control. <p>In addition the data provides a consistent national framework for commercial applications for geo-referenced addresses. Authoritative and fully maintained database of precisely grid referenced addresses providing consistently attributed detailed data for the whole of Great Britain, and forming the core addressing content of NGD.</p>	<p>OS MasterMap® Address Layer OS MasterMap® Address Layer 2 ADDRESS-POINT®</p>
<p>National Height database: Contours:</p> <ul style="list-style-type: none"> — 5m interval—Urban & Rural — 10m interval—some rural and mountain & moorland. <p>Digital Terrain Model (DTM):</p> <ul style="list-style-type: none"> — ± 2.5m @ 10 m grid—Urban & Rural (5m contours) — ± 10.0m @ 10 m grid—some rural (10m contours) and mountain & moorland 	<p>The base level data, available in Contour or DTM formats underpins public sector activity concerned with:</p> <ul style="list-style-type: none"> — Public Infrastructure, utility services and environmental planning, analysis, development and management; — Landscape and development planning including waterways management and floodplain modelling; — Risk assessment and mitigation (eg: flood and wind exposure modelling); — Ground surface and airspace obstruction modelling for national security, defence training, aviation and radio-telecommunications applications. <p>Authoritative, nationally consistent, indexed and maintained database of surveyed contours and point heights forming the core terrain and height content of NGD.</p>	<p>Land-Form PROFILE® contours Land-Form PROFILE® DTM—(10m grid)</p>

<i>Public Task Dataset</i>	<i>Statement of significance with respect to Public Task</i>	<i>Products currently produced from the Dataset</i>
<p>Supplementary high accuracy, high resolution DTM:</p> <ul style="list-style-type: none"> — $\pm 0.5\text{m @ } 2\text{ m}$ grid—selected urban & flood plain; — $\pm 1.0\text{m @ } 5\text{ m}$ grid—rural (5m Contours) $\pm 2.5\text{m @ } 10\text{ m}$ grid—rural (10m Contours) and mountain & moorland 	<p>Supplementary high accuracy, high resolution terrain data that supports high precision applications including:</p> <ul style="list-style-type: none"> — Development and civil engineering land assessment and high resolution terrain modelling; — Utility asset planning and management—pipeline pressure and signal propagation analysis; — Environmental and Insurance risk modelling (flood, pollution and noise mapping); — Emergency services and civil contingency planning / resource deployment. <p>Landscape visualisations in combination with other datasets for development planning and control, and presentations. Detailed terrain model data generated by precise observations providing consistent height information for precise landscape analysis and modelling applications.</p>	<p>Land-Form PROFILE® Plus DTM—(2m, 5m and 10m grids).</p>
<p>1:50,000 Scale Height data Contours: 10m interval—national cover DTM: $\pm 3.0\text{m @ } 50\text{ m}$ grid</p>	<p>Lower resolution height data efficient for:</p> <ul style="list-style-type: none"> — Military aviation navigation systems; — Strategic planning; — Telecommunications network and cell modelling and analysis; — Regional and catchment-level hydrological modelling. <p>Database of contours derived from OS Landranger Mapping providing consistent national data at a resolution appropriate to regional terrain modelling and visualisation.</p>	<p>Land-Form PANORAMA® Contours Land-Form PANORAMA® DTM</p>
<p>1:25,000 Raster Database</p>	<p>The data contains all of the information necessary to underpin:</p> <ul style="list-style-type: none"> — Strategic, neighbourhood and environmental planning, development and control, and designation of specified (eg: conservation) areas; — Rural estate and forestry management and controlled zone administration (eg veterinary); — Civil contingency and emergency response (particularly Coastguard, Air-Sea and Mountain Rescue); — National security and defence, command and control:—designated NATO standard military training map; — National standard for education and the safe participation in outdoor activities. 	<p>1:25,000 Scale Colour Raster OS Explorer Map</p>

<i>Public Task Dataset</i>	<i>Statement of significance with respect to Public Task</i>	<i>Products currently produced from the Dataset</i>
	Derived from NGD and providing complete, maintained and consistent national coverage at 1:25,000 scale—essential where a large area of interest and greater visual definition of communications networks is required.	
1:50,000 Scale Database	<p>Forms the core of citizen consciousness of national geography, location and neighbourhood and is the essential base-map for:</p> <ul style="list-style-type: none"> — National security, defence and military training functions; — Wide area environmental management, conservation and development; — Asset management and Marketing analysis; — General topographic reference including for tourism. <p>The database underlying the ubiquitous OS Landranger national map for general wide area topographic location and reference.</p>	1:50,000 Scale Colour Raster OS Landranger Map
1:250,000 Scale Database	Consistent national small scales database of communications, settlements, major hydrology and significant vegetation providing selected topographic information at the regional level appropriate to general planning, routing and navigation, statistical analysis and display and indexing at the regional, national and pan-European level.	Strategi® 1:250,000 Scale Colour Raster Administrative Boundary Maps
Administrative Areas Database	<p>The data underpins core public sector activities concerned with location, indexing and strategic analysis; identification of local and parochial government responsibilities, and with management of electoral and democratic processes.</p> <p>The authoritative reference dataset of administrative area polygons and complementing other formal management area boundaries (eg: Health Service; Utility Services) and statistical analysis areas.</p>	Boundary-Line

In addition to these datasets, as the National Mapping Agency Ordnance Survey provides other services for the wider public good including:

- Scientific quality location and positioning reference information;
- Printing and map content support to assist MoD in their work;
- Survey activity to assist in the timely and accurate registration of land.

ACCURACY AND REVISION OF PUBLIC TASK DATASETS

ACCURACY

Ordnance Survey sets and monitors standards of accuracy for its datasets and products commensurate with the “nominal scale” of the data.

Accuracy of geographical data may be defined in terms of parameters relating to:

- Precision: the resolution of the geo-reference co-ordinates of individual items contained within the data;
- Geometric fidelity: the degree to which the geometry of individual features within the data represent the ground alignment and shape of the features being represented;
- Relative accuracy: the degree to which distances between adjacent or near-adjacent features contained within the data represent the equivalent ground distances, orientations and physical relationships;
- Absolute accuracy: the degree to which the geo-locations of feature(s) within the data represent their absolute position on the surface of the earth.

Accuracy standards for the datasets and products maintained as the Public Task will be subject to continuing dialogue with major customers in government and business, and consumers.

Ordnance Survey’s databases and products are produced or derived from the information collected during survey and mapping activities for the most detailed large scales datasets. Current survey accuracy standards for these data are:

TOPOGRAPHIC DATA:

	<i>Absolute accuracy Compared with the National Grid. Absolute error—Root Mean Square Error (RMSE)</i>	<i>Relative accuracy Relative error. (Over specified distance between points taken from the map)</i>
1:1250		±0.5 metres
(urban)	0.5 metres	(60 metres)
1:2500 resurvey or reformed		±1.0 metres
(urban and rural)	1.1 metres	(100 metres)
1:2500 overhaul		1.9 metres
(urban and rural)	2.7 metres	(200 metres)
1:10 000		±4.0 metres
(mountain and moor-land)	4.1 metres	(500 metres)

TERRAIN AND HEIGHT DATA:

	<i>Digital Terrain Model</i>		<i>Contours</i>	
		<i>Absolute accuracy Absolute error— Root Mean Square Error (RMSE)</i>		<i>Absolute accuracy Absolute error— Root Mean Square Error (RMSE)</i>
	<i>DTM Grid Interval</i>		<i>Contour Interval</i>	
<i>High Resolution Data</i>				
Urban & selected floodplain areas	2.0 metres	±0.5 metres	Only supplied as DTM	—
Rural areas	5.0 metres	±1.0 metres	Only supplied as DTM	—
Mountain and moor-land areas	10.0 metres	±2.5 metres	Only supplied as DTM	—
<i>Standard Resolution Data</i>				
Urban areas	10.0 metres	±2.5 metres	5.0 metres	±1.0 metres
Rural areas	10.0 metres	±2.5 metres	5.0 metres	±1.0 metres
Rural areas	10.0 metres	±5.0 metres	10.0 metres	±1.8 metres
Mountain and moor-land areas	10.0 metres	±5.0 metres	10.0 metres	1.8 metres

REVISION

Ordnance Survey uses a combination of Continuous and Cyclic Revision programmes to maintain the currency of the Public Task datasets, according to the nature of the change and its importance to users.

Continuous Revision:

- High profile developments for which user demand will require all of the relevant information to be captured by the date of completion/opening;
- Significant housing and industrial developments, new communications (roads, railways etc.) and other significant major changes to the landscape, including demolitions and changes to addressing and naming information, which merit inclusion within the database within 6 months of identification of the change.

Cyclic Revision:

Systematic sweeps, including the use of remote sensing techniques, through the mapping of rural and mountain & moorland areas at intervals of between 2 and 10 years according to the nature of the landscape and the frequency of change, for:

- Other changes, particularly in rural and moor-land areas to buildings, land enclosures, vegetation and other less significant geography.

Revision policies for the datasets and products maintained as the Public Task will be subject to continuing dialogue with major users in the government, business and consumer arena.

Annex 2**ORDNANCE SURVEY'S FINANCIAL PERFORMANCE****FINANCIAL PERFORMANCE OF THE TRADING FUND**

B1 Several submissions have discussed Ordnance Survey's financial performance as a Trading Fund.⁹⁰ The Ordnance Survey Framework Document 2004 makes it clear that Ordnance Survey is required only to generate sufficient revenue to cover operating costs, investments and repayments and a return on capital employed, year on year in a sustainable manner. The Framework Document makes it clear that, rather than focus on generating profit:

"Financial management of Ordnance Survey is underpinned by three principles:

- The Trading Fund model is one of breaking even taking one year with another after allowing for operating costs, investment needs, loan repayments and agreed levels of dividend.
- In the event that Ordnance Survey is more profitable than forecast after investing in national interest and customer driven improvements, surpluses in excess of those needed to sustain future development can be avoided by lowering prices.
- Revenue shortfalls will be compensated, where possible, by an appropriate combination of increased productivity, efficiency savings, reduced costs, lower dividends and curtailing loss-making non-core activities."

B2 Any consideration of Ordnance Survey's financial performance with regard to NIMSA⁹¹ should take into account that NIMSA was a cost-recovery contract not a grant. NIMSA funding covered only those agreed activities actually undertaken.

Any analysis which disregards revenue from NIMSA⁹² must also disregard equivalent costs, since the costs incurred on NIMSA-related activities would not have been incurred in the same period without the NIMSA funding. As the outputs of NIMSA-funded activities have benefited all users, it is more correct for financial analyses of Ordnance Survey's performance to include both costs and revenue related to NIMSA.

B3 Government support for workforce restructuring⁹³ (a total of £18m over the financial years 1999–2000 to 2001–2002) assisted Ordnance Survey to transfer organisationally into the Trading Fund environment. Ordnance Survey would otherwise not have invested in this restructuring with the consequential implications for long term operating costs and business efficiency.

B4 The AA settlement⁹⁴ related to unpaid royalties (including royalty liabilities incurred after the start of the Trading Fund) and to costs of investigation and pursuance of the infringements that Ordnance Survey would not have incurred had AA been properly licensed for those uses of the Crown copyright material.

⁹⁰ Intelligent Addressing Limited, Uncorrected Evidence—04, paragraph Summary—Q6, paragraph Q1.3, paragraph Q6.5; Locus Association, Uncorrected Evidence—05; Background—6th paragraph, Locus Response to Q1—2nd paragraph; Chris Corbin, Uncorrected Evidence—12; Paragraphs 4 and 5.

⁹¹ Uncorrected Evidence 04, paragraph Q1.3; Uncorrected Evidence—05; Background—6th paragraph.

⁹² Uncorrected Evidence 04, paragraph Q1.3; Uncorrected Evidence—05; Locus Response to Q1—6th paragraph.

⁹³ Uncorrected Evidence 04, paragraph Q1.3

⁹⁴ Uncorrected Evidence 04, paragraph Q1.3