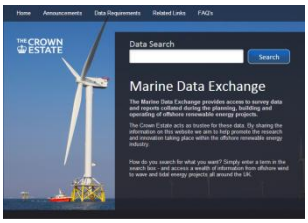
Marine Data News

June 2013 Issue 24 - Marine Data News

This Issue...

Marine Data Exchange launched by The Crown Estate

by Peter Edmonds - The Crown Estate



The Marine Data Exchange (**www.marinedataexchange.co.uk**) allows anyone with an interest in the marine environment the ability to access a plethora of data collected from The Crown Estate's low carbon energy development partners.

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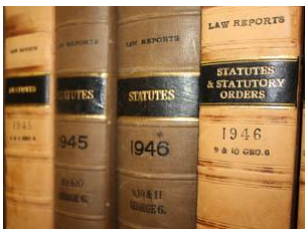
MEDIN Case Study: PhD Research Accepted by the 'ICT for Environmental Regulation Workshop'

by Laura German - University of Southampton



PhD case study considering the use and reuse of academic research data by research users in a digital age. It addresses the paradox between the copy, cut and paste nature of the Web and the greater requirement for digital, definitive data versions.

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The Ocean Data Interoperability Platform (ODIP) project

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National Oceanography Centre releases tidal prediction app: anyTide

BODC to host 14th International Argo Data Management Team Meeting (ADMT14).

ADS publishes two new Guides to Good Practice, Caring for Digital Data in Archaeology and Geophysical Data in Archaeology.

Events

MARINE SCIENCE EVENTS CALENDAR
http://marinescienceevents.co.uk/

Register for future MEDIN Standards and tools workshops: http://slink.eu/n3

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The ODIP project will organise international workshops in Europe, the USA and Australia in order to foster the development of common standards and develop prototypes to evaluate and test selected potential standards and interoperability solutions.

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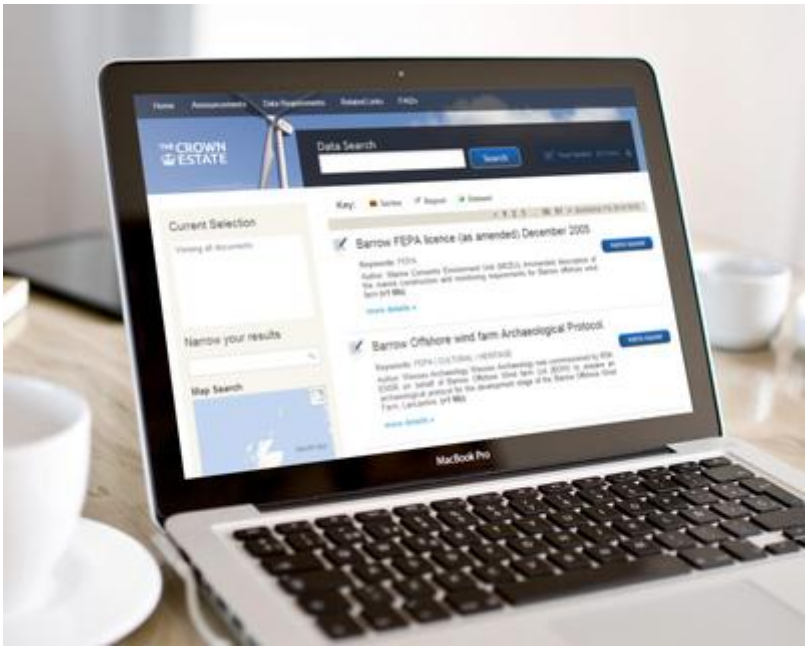
Marine Data Exchange launched by The Crown Estate

by Peter Edmonds - The Crown Estate

Developed by The Crown Estate, the Marine Data Exchange (**www.marinedataexchange.co.uk**) allows anyone with an interest in the marine environment the ability to access a plethora of data collected from The Crown Estate's low carbon energy development partners. Data types include: visual and landscape assessments; bird and mammal population studies; habitat characterisations; geophysical survey data; and archaeological studies.



Search results page from Marine Data Exchange

By allowing developers, businesses and other interested parties, free access to these data, the Marine Data Exchange aims to contribute towards lowering the costs of developing in the marine environment, enhancing the sustainability of marine businesses and furthering knowledge of the UK's marine areas.

Ultimately, these benefits will help everyone with a stake in the UK's coastal and marine environment to develop sustainably and create opportunities for businesses to grow, developers to build and conservationists to conserve. The data also points towards an enhanced push towards transparency in the sector.

As the organisation charged with the management of the UK's seabed, we are uniquely positioned to encourage and collate research on the marine environment. The Marine Data Exchange utilises the latest technology to create an easily accessible hub for crucial data, which will save businesses time and money and will help increase environmental sustainability.

The Marine Data Exchange builds on the success of:

- the previous COWRIE (Collaborative Offshore Wind Research into the Environment) data management system
- European Commission and UK Government initiatives such as MEDIN (Marine Environmental Data and Information Network)

- INSPIRE (a European Commission directive establishing infrastructure for spatial information to support European Community environmental projects)
    - data.gov.uk (a UK government project that aims to open up government data sets to the general public)

The Marine Data Exchange implements MEDIN Discovery Standard metadata and data made available in the future will conform to MEDIN Data Guidelines. The Crown Estate is working with MEDIN to ensure that data held in the Marine Data Exchange will be discoverable via MEDIN's data portal, and that data will be archived in MEDIN's network or Data Archive Centres.

The portal is accessible at **www.marinedataexchange.co.uk** and an on-going process of upgrades will see user feedback incorporated to ensure the resource continues to evolve in terms of its usability and functionality.

MEDIN Case Study: PhD Research Accepted by the 'ICT for Environmental Regulation Workshop'

by Laura German - University of Southampton

Early last year, I interviewed six individuals involved with **MEDIN** as part of a PhD case study. The interview participants had specialist knowledge from data science to legal expertise. My research considers the use and reuse of academic research data by research users in a digital age. It addresses the paradox between the copy, cut and paste nature of the Web and the greater requirement for digital, definitive data versions. It evaluates existing best practices for maintaining definitive data versions by guarantors, such as MEDIN. It sets an agenda for academic research data reuse in a digital age.

My thesis is produced for an interdisciplinary audience. It tests the robustness of a model of provenance and licensing, as a new ethical, moral, legal, technical and social guarantor for research users and producers within the sciences, social sciences and humanities.

The methodology encompasses a literature review, semi-structured interviews and three representative case studies within the sciences, social sciences and humanities to assess current practices. Focus on three illustrative case studies has permitted direct access to multi-disciplinary experts (through semi-structured interviews), and unpublished material.

MEDIN was selected as one of these representative case studies, because it is an existing data platform that is designed to maintain definitive versions. It encourages the marine environmental community to discuss, develop and deploy standards of best practice. It aims to improve not only the access to data but its quality.

My research abstract – 'How the Law Supports Existing Models of Environmental Data Reuse: The 'Marine Environmental Data and Information Network' (MEDIN) Case Study' – was accepted for presentation by the '**Information and Communications Technology for Environmental Regulation: Developing a Research Agenda Workshop**'. This workshop takes place at the**National University of Ireland, Galway, on the 20th – 21st June 2013**. This paper focuses on MEDIN as an illustrative case study. It aims to showcase MEDIN as an important, existing model for marine environmental data and information re-usage.

This paper examines:

1) legislation that mandates the reuse and/or access of certain types of environmental data, such as the INSPIRE Directive, Environmental Information Regulations, and the Freedom of Information Act; and,

2) the control over reuse of data and products, such as copyright and data licensing.

This paper presents key findings from semi-structured interviews with six individuals directly involved with MEDIN. It determines how these two strands of law support (and potentially hinder) the reuse of marine environmental data at MEDIN. This research has been selected as one of the best student abstracts submitted to the workshop.

I would like to express my gratitude to MEDIN and all the interview participants that are involved with this case study.

Laura German is a 3rd Year Web Science PhD Candidate and member of the **Web Science Doctoral Training Centre** at the University of Southampton. Email: **leg406@soton.ac.uk**.

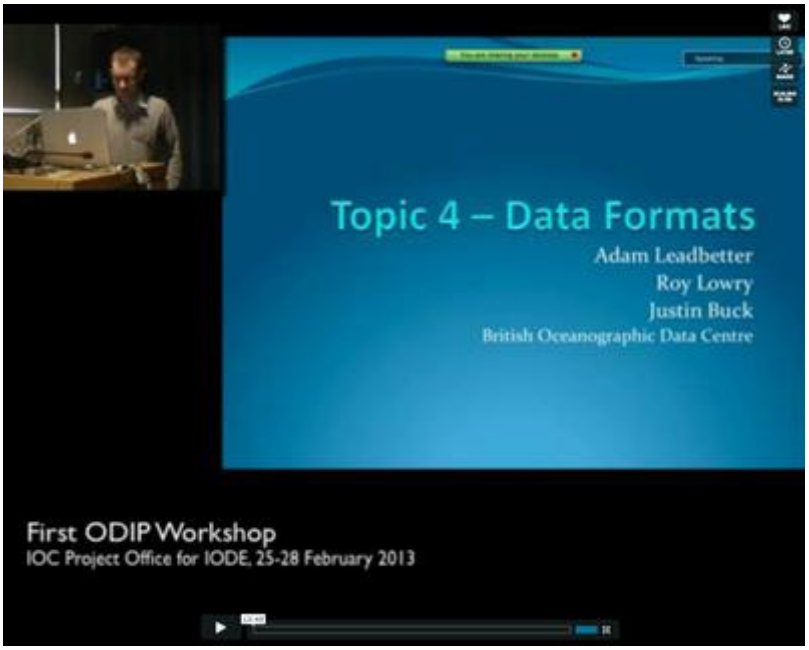
The Ocean Data Interoperability Platform (ODIP) project
by Adam Leadbetter & Lesley Rickards - British Oceanographic Data Centre (BODC)

Marine data are valuable resources which have a high cost of acquisition and as such should be well managed and made as widely available to end users as possible for a variety of uses including scientific research, marine management and planning, policy and decision making, and economic activities.

Europe, the USA, Australia and the IOC's **International Oceanographic Data and Information Exchange** (IODE) are making significant progress in allowing the discovery and access of marine data through the development, implementation, population and operation of distributed ocean and marine observing and data management infrastructures.

The **ODIP** project will organise international workshops in Europe, the USA and Australia in order to foster the development of common standards and develop prototypes to evaluate and test selected potential standards and interoperability solutions.

The first ODIP workshop was held at the IODE project office in Oostende during February 2013. Over thirty marine data experts from around the world met, either in person or virtually, to discuss a range of topics including: common data formats; common metadata formats; methods of exchanging data and metadata; common vocabularies to describe data and metadata; and tools for adding value to data. Videos of the presentations from this workshop have been made available at**http://vimeo.com/album/2277623**.



MEDIN is well represented within the ODIP consortium, with the**British Geological Survey** and the **British Oceanographic Data Centre** respectively co-ordinating and participating in the project. During the Oostende workshop the work of MEDIN was mentioned during discussions and was well received by the group. This overlap of participants will also allow us to feedback important developments from the ODIP project to MEDIN. The second ODIP workshop is scheduled to be held in **San Diego between 2nd and 6th December 2013**.

The ODIP project is funded by the EU within the FP7 Research Infrastructures programme (Grant agreement 312492) for 36 months from 1st October 2012 until 31st September 2015. The project website can be found at **http://www.odip.eu**.

News

National Oceanography Centre releases tidal prediction app: anyTide

http://noc.ac.uk/using-science/products/anytide-app

anyTide is a mobile tidal prediction app that has been created by the National Oceanography Centre (NOC), funded by the Natural Environment Research Council (NERC). NOC is one of NERC's four research centres.
anyTide provides tidal predictions around the North Western European Shelf, with particular focus on the British Isles. There are two types of tidal predictions in the app:

- Predictions based on data from **tide gauges** situated at 44 locations around the British Isles
- Predictions based on **computer models** developed at NOC, Liverpool. This models the coastline as 1.8km grids and allows tidal predictions at any grid point around the coastline (and in major estuaries).

The models based on a 1.8km grid are a novel feature of the app and allow users to obtain tide predictions in a much wider range of locations (e.g. in areas away from ports with tide gauges) and "fill in the gaps" between observation points.

The app is available in the Apple app store, at:
https://itunes.apple.com/us/app/anytide/id605322271?mt=8&ign-mpt=uo%3D2

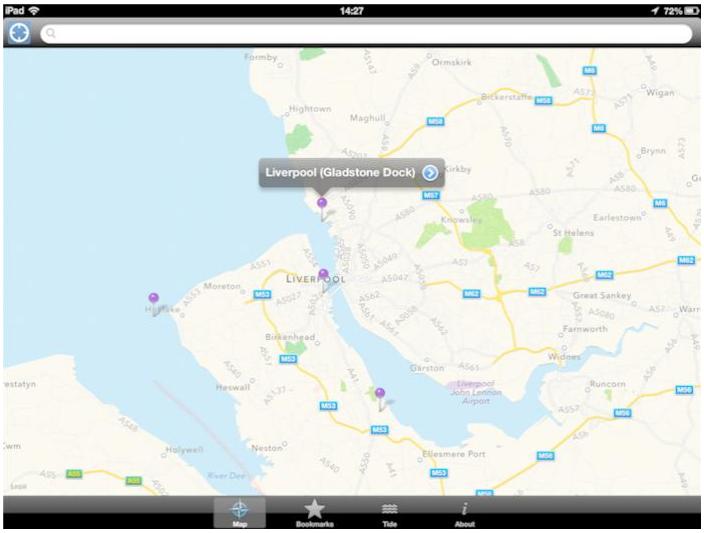
The anyTide app is not to be used for navigation purposes.

Predictions based on Known Ports/Observation Points

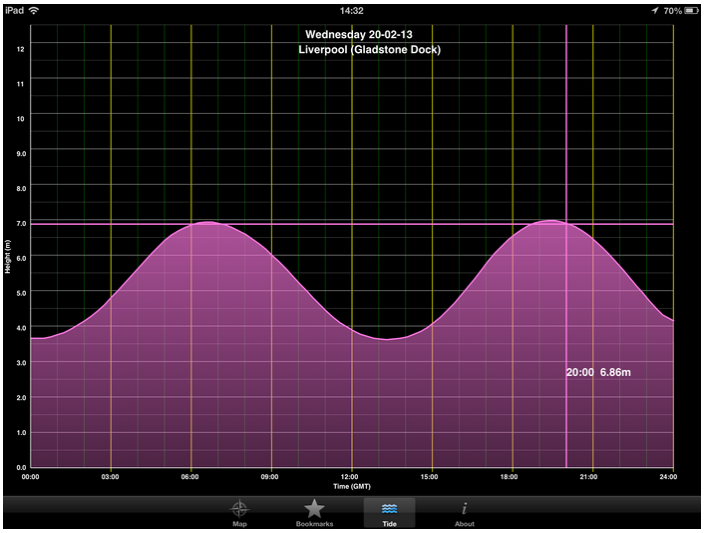
These locations are shown as purple pins on the map page.

Pinch the screen to zoom in on the port of interest, e.g. Liverpool (Gladstone Dock), and touch the pin to

display the port name and tide button:

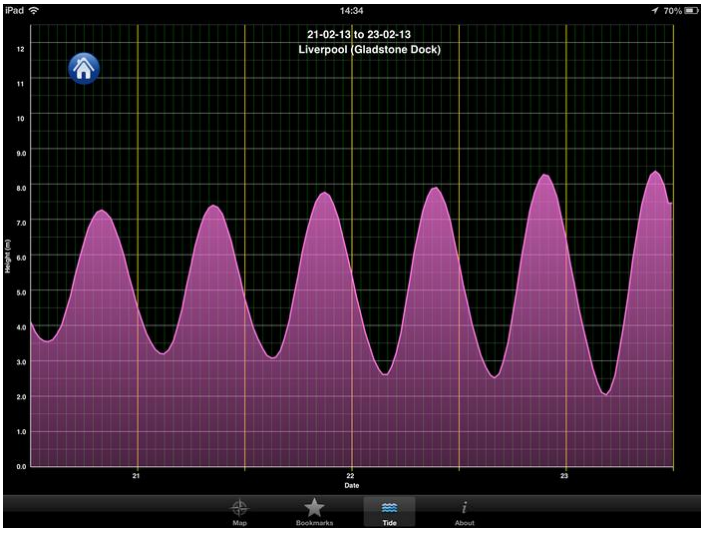


Now pressing the blue arrow on the button displays the tide prediction for the current day:



Placing your finger on the tide chart at any point displays cross-hairs which show the tide height and time at that particular point. Moving your finger across the chart scrolls the cross-hairs and shows the progressive tide level and time.

Pinch the chart to zoom in/out and swipe to change the dates displayed:

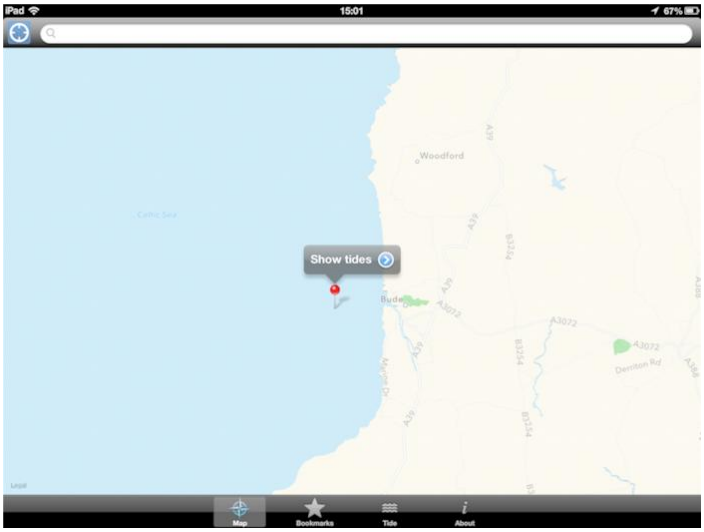


Pressing the blue "home" button when zoomed out or on a future date will return to today's tide prediction.

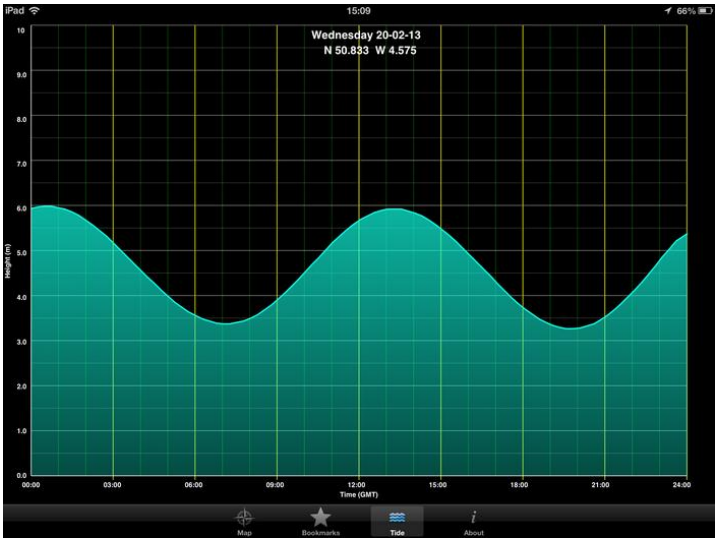
The tide charts for known ports are displayed in purple.

Predictions from User Chosen Map Coastal Locations

To obtain a prediction at a point not covered by port data, pinch to zoom in the map to the area of interest and touch the map at the point for which a tidal prediction is required. This displays a red pin. Touch the pin to display the "Show tides" button:



Pressing the blue arrow button to "show tides" will display today's tide for this location. *Please note that the pin location chosen will jump to the nearest defined grid point before displaying the tide at this point (i.e. to the nearest 1.8km grid).* The latitide and longitude for the exact location of the tide model is shown at the top of the chart screen, underneath the date.



Similar to the tide charts for known ports, the screen can be pinched to zoom out and in and swiped to move dates. The blue "Home" button will always return to the tidal prediction for the current date. Pressing and holding at a point on the chart will display the crosshairs with the tide height and time.

The tide charts for user-defined locations are shown in green.

If you place a pin on an area where no tidal model is available (e.g. far offshore or inland), the app will automatically jump to the nearest valid data point. This feature is also useful in large tidal river estuaries for finding the furthest upstream model available. e.g. placing a pin near Gloucester and asking for a tide, will jump the pin to the nearest valid grid point on the River Severn.

Bookmarks

Current locations (e.g. frequently used locations) can be bookmarked for easier future reference.

From the tide chart of the required location, press the "Bookmarks" symbol at the bottom of the screen, which takes you to the Bookmarks screen. Press the "Add" button to bookmark the current location. By default the name will show the port name or the lat/long of the location. This can be changed to any suitable name.

Bookmarks can be edited or deleted by pressing the "manage" button in the bookmarks screen.

Working Offline

anyTide needs to have internet connection to create tide predictions (either via wi-fi or a cellular network). However, **once a location is bookmarked, predictions for that location are available even when the device has no internet connection**.

Time Displayed and Chart Scaling

Please note that the time is **always displayed in GMT** - the user must take account of this during BST or different time zones.
The tide height scale in metres can be altered using the anyTide section in the Settings function of your

iOS device. The most useful setting is Auto, which scales the tide height axis according to the values displayed. However, the setting can be manually set to different values, ranging from 5 metres to 15 metres, which may be more effective for a particular location.

Free Predictions and In-App Purchases

anyTide includes free access to any tides in the British Isles and wider NW European shelf for the current day. In addition, a single pre-loaded bookmark (close to the site of the original Proudman Oceanographic Lab near Liverpool) is available, allowing unrestricted tide predictions at this point. This allows the user to assess how the app's tidal prediction functionality works over longer time scales.

In-app purchase allows the user to purchase a calendar year's worth of data (predictions anywhere in the British Isles and NW European shelf) for £1.49. Currently, data up to and including 2020 is available for purchase.

Go to the "About" screen and select the menu item "Purchase Extensions" and select the "Buy" button for the data you require.

Acknowledgements

anyTide was developed in conjunction with **Winchester Innovation**. For further information, **see** www.winchesterinnovation.co.uk
For further information about NOC's business development and commercialisation activities, **email**: business@noc.ac.uk orgerry.scott@noc.ac.uk

14th Argo Data Management Team Meeting

http://www.bodc.ac.uk/about/news_and_events/argo_admt14.html

ADMT14 logo ©

We are pleased to announce that BODC will host the 14th International Argo Data Management Team Meeting (ADMT14). The meeting will be held in Liverpool's Foresight Centre on 14 - 18 October 2013.

14 and 15 October are reserved for a delayed-mode quality control workshop, and the plenary data management meeting will be held on 16 – 18 October.

The meeting will offer a chance for Argo data managers to discuss the community's progress in developing and enhancing the continually evolving global project. This will include a review of action items agreed at ADMT13 in November 2012 and the development of an updated action list. A detailed agenda will be released nearer the time of the meeting.

Meeting attendance is free. For more information and to confirm your attendance please use the register link below (password required). You will also find links to local tourist information, some suggested hotels in the city and transport information.

If you have any queries please contact local organisers Justin Buck (juck@bodc.ac.uk) or Clare Davis (cldav@bodc.ac.uk).

Register at
http://www.bodc.ac.uk/extlink/https%3A//www.eventbrite.co.uk/event/6337729319%3Fref%3Debtnebregn

Two new print publications of the Guides to Good Practice are out now!

http://archaeologydataservice.ac.uk/blog/

The Archaeology Data Service and Digital Antiquity are proud to announce the print publication of two new Guides to Good Practice, *Caring for Digital Data in Archaeology* and *Geophysical Data in Archaeology*. These two new print publications are the culmination of three years' work to update the online Guides to Good Practice (http://guides.archaeologydataservice.ac.uk/) to cover a wider range of archaeological data and to refresh the content with up-to-date information.

A wide variety of organisations are both creating and retaining digital data from archaeological projects. While current methods for preservation and access to data vary widely, nearly all of these organizations agree that careful management of digital archaeological resources is an important aspect of responsible archaeological stewardship.

Caring for Digital Data in Archaeology

This Guide to Good Practice aims to improve the practice of depositing and preserving digital information safely within an archive for future use, by providing information on the best way to create, manage, and document digital data files produced during the course of an archaeological project. To do this *Caring for Digital Data in Archaeology: A Guide to Good Practice* is separated into three primary sections:

1. *Digital Archiving: An Introduction to this guide* focuses on the need for digital archiving through the use of two case studies as well as how to best use the guides.
2. *Planning for the Creation of Digital Data* outlines issues surrounding data creation and capture, selecting data for digital archiving, documentation and metadata, as well as issues surrounding copyright and intellectual property rights.
3. *Common Digital Objects,* the final section, outlines best practices specific to documents, data sets, and images. Each section covers which formats are archival, and specific issues related to each file format or type.

Copies can be ordered online at: http://www.oxbowbooks.com/dbbc/caring-for-digital-data-in-archaeology.html

Geophysical Data in Archaeology

This 2nd edition of *Geophysical Data in Archaeology: A Guide to Good Practice*systematically explores what should be included in an Archive, illustrated with relevant examples. A conceptual framework is developed that allows assembling data and meta-data so that they can be deposited with an Archiving Body. This framework is also mapped onto typical database structures, including OASIS and the English Heritage Geophysics Database. Examples show step-by-step how an Archive can be compiled for deposition so that

readers will be able to enhance their own archiving practice.

Geophysical data are sometimes the only remaining record of buried archaeological features when these are destroyed during commercial developments (e.g. road schemes). To preserve them in an Archive can therefore be essential. However, it is important that data are made available in formats that can still be read in years to come, accompanied by documentation that gives meaningful archaeological context. This Guide covers the creation of the necessary metadata and data documentation. There is no point preserving data if they cannot be used again.

Copies can be ordered online at: http://www.oxbowbooks.com/oxbow/geophysical-data-in-archaeology.html

These print publications are intended to be used in concert with the comprehensive online Guides to Good Practice site, which will be maintained with up-to-date information and provide more depth of content.