OFFICE OF THE
SCOTTISH ROAD WORKS COMMISSIONER

Commissioner Advice Paper 13 - Vault - Frequently Asked Questions

What is Vault?

The Community Apparatus Data Vault system (Vault for short) is a layer of information included in the Scottish Road Works Register (SRWR). Vault is a centralised repository of apparatus information, alongside details of where works are taking place.

Built on the foundations of the UK Government funded VISTA project, Vault allows the display of information from disparate GIS systems on one screen at the same time. A set of pre-agreed transformations are applied to the supplied data, resulting in a map using common colour coding, symbols and terminology.

What apparatus is shown on Vault?

From 1 April 2024, all apparatus owners are required to submit details of plant information to Vault. At time of writing, all the major undertakers, as well as the majority of the roads authorities supply data to Vault.

Do I still need to contact owners of apparatus before excavating?

Currently yes. Whilst it became mandatory on 1 April 2024 to submit data to Vault, it is expected it will take time until the data shown in Vault will be as effective as getting the information direct from asset owners. Once this is achieved, it is expected that works promoters will be able solely to use Vault as a source of plant information. Note that there are cases where contact must be made to plant owners before excavation takes place near their assets, this statement purely relates to plant information. In the meantime, it is recommended that assurance is sought that the information shown in Vault is accurate before excavation takes place.

Is it a legislative requirement that I provide my data to Vault?

Section 119 of the Transport (Scotland) Act 2019 came into force on 1 April 2024 and makes it a requirement that asset owners provide plant information to Vault. Failure to comply with this requirement is a criminal offence.

Why do I need to provide data to Vault?

Doing so ensures that, before an excavation takes place workers on site have accurate and up to date information about what lies beneath the surface. It is also a requirement under Health and Safety regulations (HSG 47) to share this information to help prevent injury to operatives and costly damage/disruption to services. Vault is a very simple and effective way to help provide this information. It can protect operatives from injury and your asset from being damaged.

Who has access to the information shown on Vault?

The information shown on Vault is only available to users of the Scottish Road Works Register and the Scottish Road Works Commissioner has restricted access to the register to the roads authorities and undertakers working in Scotland. Data will not be shared with any third parties without the express prior permission of those that have supplied the data.

What data should I supply?

Any data you hold electronically on the location of your apparatus, be it existing apparatus, apparatus now abandoned or planned locations for future apparatus. One of the aims of Vault is to display any data in any format from any GIS. While there are some limitations Symology, the provider of the Scottish Road Works Register, has been able to make use of many differing datasets and present them as a harmonised set of information. For best results data provided in an open/standard GIS format is recommended. To prevent distortion of the geometry provided an OSGR compatible co-ordinate referencing system is required. Assets can be represented as point symbols, lines or a hatched-out polygon.

Here is a list of potential datasets (note this is not an exhaustive list, all types of data will be considered):

- Electricity (shown in red)
    - Power Cables
    - Overhead Lines
    - Street Lights & Controller Points
    - Illuminated Signs/Bollards
    - EV Charging Points
    - Any street furniture such as Manholes/Chambers/Cabinets
- Fuel/Oil Pipelines (shown in magenta)
    - Also any street furniture such as Manholes/Chambers/Cabinets
- Gas Mains and Pipelines (shown in yellow)
    - Also any street furniture such as Manholes/Chambers/Cabinets
- Heating Apparatus (shown in green)
    - Also any street furniture such as Manholes/Chambers/Cabinets
- Telecoms/Communications (shown in grey)
    - Telecom Cables/Ducts
    - Traffic Signals
    - Weather Stations/Ice Sensors
    - Safety Cameras/CCTV Columns
    - Variable Message Signs
    - Cabinets/ Monitoring Stations
    - Loops/Counters
    - Masts
    - Any street furniture such as Manholes/Chambers/Cabinets
- Sewerage (shown in brown)
    - Foul Sewer/Combined Sewer (surface and underground drainage)
    - Gullies/Road Drainage
    - SUDS/Soak-away/Swale
    - Flooding Areas
    - Any street furniture such as Manholes/Chambers/Cabinets

- Water (shown in blue)
    - Water Mains
    - Hydrants/Valves
    - Any street furniture such as Manholes/Chambers/Cabinets
- Miscellaneous (shown in purple)
    - Street Trees
    - Engineering Difficulties
    - Any other street furniture
    - Unidentified Buried Objects

There is a free text element that can be used to provide additional information on the assets, such as an emergency out of hours contact for high priority assets. We will work with you to identify how such data can be transformed to best show it in Vault when a dataset is first submitted. Consideration should be given to indicating the risk of damaging the asset as one of the attributes provided in the datasets. As well as the Standard assets Vault can differentiate between High Risk, Medium Risk, and Above Ground assets.

- High Risk – indicated with a line made up of dash, dot, dot. E.g. dangerous assets that, if damaged, could cause harm to persons or property.

- Medium Risk – indicated with a line made up of dash, dot, dash, dot. E.g. assets that if damaged could lead to a major/costly service outage.

- Above Ground – shown as a dashed line.

- Standard – shown as a solid line. This is the default if no categorisations are described.

The assets described for each of the categories above are only given as examples, each organisation is free to determine which category is most appropriate for their assets.

What is the process for supplying data to Vault?

There are two methods available for organisations to provide their data to Vault. They are:

Supplied as a Quarterly Upload of files to the SRWR

Using this method an organisation will provide their data as an upload to the SRWR Service Provider. This data will be processed through and held on the register, to be supplied to users when requested.

Updates should be submitted by the 15th day of the following months; February, April, June, August, October and December.

The first time your organisation submits data, contact should be made at least one month before the next submission deadline. This gives time to set up the rules for transformation as well as the tables in which to store the data. The transformation map is built from the metadata describing the information, such as details of what each column means, valid attribute values, long descriptions for coded values, items to be highlighted etc. Items to be highlighted using different symbology could include; dangerous apparatus, unidentified buried objects, abandoned apparatus, planned assets, assets pending removal, etc. There can be multiple datasets. For example, one for streetlight columns, one for cables, one for gullies and so on. While we will be as open as we can to different data formats and files, you may be asked to change elements of the files provided to make it possible to integrate your data into Vault. This information is then combined into a common format for display on the Vault map. A detailed description of this process will be provided when you first contact Symology to discuss the submission of data.

Thereafter files should be regularly exported from your GIS for the datasets described above. These exported files should then be compressed and uploaded to the Vault Portal for verification. Each upload is a replacement and not an update, so any data from previous uploads made will be overwritten. The file names should not be changed between each

upload, as the names are validated against an expected list and unknown files will be rejected. Once uploaded and checked a submission form should be completed, this gives information such as a description of the content provided, contact details and which files are included. This helps verify the content submitted matches your description. There is an e-learning package in the Aurora Academy that details the process for uploading files to Vault.

Supplied as an On-demand dataset from own GIS server

Using this method to supply data your organisation will make your Vault data available live from its own server as a GIS mapping layer. The Vault data will be taken directly from your systems when requested by a SRWR user. No data is held in the SRWR.

This requires more expertise to set up and configure correctly, as such discussion should entered into with the SRWR Service Provider and the Scottish Road Works Commissioner to consider the pros and cons of this solution.

This method of supply could also cause performance issues to other users of the SRWR if it is not set up correctly. As such the following minimum service levels are set for organisations wishing to use this method;

- Your server will respond to a request for information within 10 seconds. After this time the request will time out and will be deemed to have failed.
- If the SRWR service provider raises an issue with your service (for example there are too many failed requests) you will ensure a response to the SRWR service provider within 2 hours, acknowledging the issue.
- You will act to ensure any outages of your service reported (as above) are resolved within 2 days of report. Failure to restore your service in this time will be considered a failure to provide data to Vault and reported to the Commissioner.

What security measures are in place to prevent abuse of my data?

By default, data is placed upon the map on the Vault layer and is visible immediately. It is, however, possible to have data that is potentially sensitive placed on a hidden layer instead. This layer is not shown unless the user makes a request to view a section, at which time information is revealed (only for the area requested) and details are logged on the SRWR of the user requesting the data. If the user pans their view of the map to a new location, no new data is shown from the hidden layer unless the user makes a further request for data from the new section of map. This provides an audit trail of which users viewed the data contained within the hidden layers. This audit trail can be shared with appropriate data providers on request.

Should you wish to protect your data in this way this option can be discussed when submitting data for the first time.

What about apparatus placed/owned by non-undertakers?

Roads Authorities are required to supply information relating to apparatus placed under NRSWA Section 109 permissions. This data should include an indication of the type of apparatus (e.g. gas, telecoms, electricity etc.) along with contact details for the owner of the apparatus. Should the apparatus be later adopted by an undertaker, who supplies their own data to Vault, it can safely be removed from the authority's submission once it has been added to the submission from the new owner of the apparatus.

How should apparatus in shared ducts or assets be dealt with?

Where apparatus is placed in a shared duct or other asset, both the owner of that duct or asset and each owner of any additional apparatus placed therein are expected to record details of their apparatus on Vault. Each owner of additional apparatus should highlight that it is placed in another's asset, to help those excavating to identify its location.

How are unidentified buried objects dealt with?

Should an undertaker or an authority uncover unidentified apparatus during the excavation of their works, details of the Unidentified Buried Objects should be shared by supplying information to the SRWR. Should the apparatus be later be identified as belonging to an undertaker, it should be added to the submission from the newly identified owner of the apparatus.

What about apparatus that is abandoned/no longer in use?

If the apparatus is no longer in the ground, then it should not be provided when supplying information to Vault. This will remove the asset from the system.

If the asset is still in place there is the option to describe an Asset Use Status for each asset provided to Vault. This field can contain values like “In Use”, “Abandoned”, “Planned”, “Proposed” etc. as part of the metadata. How this field should be interpreted should be agreed for each dataset when setting up the transformation rules, explaining how to derive which status should be shown for each asset from the metadata.

Version Control

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