



**G-CLOUD 15
SYMOLOGY STREET WORKS
(CLOUD EDITION)**

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G-CLOUD 15

SYMOLOGY STREET WORKS

(CLOUD EDITION)

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SECTION 1 – SERVICE OVERVIEW

Service Overview

Symology's Street Works solutions equip Authorities with comprehensive functionality for the management of all activities which could potentially cause disruption on their highway. Compatibility with both Street Manager and EToN enables all Authorities to effectively discharge their network management duties under the New Roads and Street Works Act 1991 (NRSWA) and the Traffic Management Act 2004 (TMA).

Both Street Works Notices and Permits are accommodated, as are all historical versions of the EToN specifications, covering Utility and Highway Authority works in addition to non-works activities. Furthermore, specific configurations can enable multi-organisation operations ensuring standard facilities, such as access and authorisation, are inbuilt. This model is ideally suited for use at national level or local/combined organisation (Authority) level, both of which have been operating live for a number of years across Symology's existing customer base.

Powerful conflict checking facilities identify where works with overlapping dates occur in the same street, within the vicinity of other works, diversion routes and in user-defined co-ordination groups, giving the Traffic Manager full control of received notices and permits. As an Activity is recorded, either manually by an Authority Works Promoter or by an incoming notice, potential conflicts can be reviewed immediately, using embedded mapping (GIS) facilities.

Vast inspection functionality facilitates the effective management and progression of both statutory and locally defined inspections, including mobile working capabilities. Symology's mobile application covers the ability to receive inspections data via automated synchronisation and enable offline working in the field, synchronising when network connectivity permits.

Sophisticated reporting tools via dynamic in-built enquiries provide a unique and beneficial range of flexible instantaneous exception reports required to monitor the progress of Street Works Notices, Permits, Fixed Penalties and Defects. These enquiries are user configurable, without technical assistance, with immediate onscreen output which can be exported in CSV, XLSX and Shapefile format, enabling quick and easy access to your data. Furthermore, Street Works Performance reports are also provided as standard, which can be used to assist with annual reports, where applicable.

All the various mechanisms that are used to provide the incentive for speedy and efficient completion of works, such as street occupancy rental, overstay charging and remedial works or inspection failure penalties are accommodated. All these options are provided, in addition to charging policies for notices/permit applications and statutory inspections. An integrated charging function, with manual adjustment facilities, enables Street Authorities to produce accurate, substantiated invoices, efficiently managing the financial element within the solution.

SECTION 2 – DETAILED SUMMARY OF SERVICE

Detailed Summary of the Service

Symology Street Works (Cloud Edition) includes:

Products & Services	Included
Software Products	
Street Gazetteer	✓
Embedded Mapping (based on ESRI ArcGIS technology)	✓
Street Works for Traffic Managers & Works Promoters	✓
Integrated Activities	✓
Mobile Application Interfaces	✓
Integrated Reporting facilities	✓
Other Included Services/Facilities	
Separate Live and Test Systems	✓
Causeway One.Network (One.Network) Interface (where required)	✓
Regular MasterMap Updates	✓
Integrated Statistical Reporting facilities	✓
Street Works - Hosted EToN Communications (where required)	✓
150GB of disc space for system, database and objects	✓
Other Additional Options	
Environment Options	
Multi-Organisation Licence	
Additional Systems	
Enhanced Service Level	
Single Sign-On	
Interfaces	
Customer Service Direct Interface (Web Reporting Portal Use)	
Street Works & Licences Interface	
Corporate Finance Interface	
Bespoke Interface Hosting/Monitoring (Not Dev, PM or Implementation) - Small	
Bespoke Interface Hosting/Monitoring (Not Dev, PM or Implementation) - Medium	
Bespoke Interface Hosting/Monitoring (Not Dev, PM or Implementation) - Large	

SECTION 2 – DETAILED SUMMARY OF SERVICE

TomTom API	
Web Portals	
ApplyForIt Web Reporting Portal (Online Licence Applications)	
ApplyForIt Payment Integration	
ViewIt Web Portal (Publication Solution)	
ViewIt Diversion Routes	
ViewIt Historic Works	
It Portal Additional Environments	
It Portal Add-ons (VIP, Additional Language, etc.)	
Map Sharing	
Map Sharing	
Corporate GIS API (WFS) Publication	
Reporting	
Advanced Reports Licence	
Data Download	
Data Warehouse	
Bespoke Reporting Package – Small	
Bespoke Reporting Package – Medium	
Bespoke Reporting Package – Large	
Enhanced Reporting – Small (per org. Excel Uploads, dashboard creation, embedded designer)	
Enhanced Reporting – Medium (per org. Excel Uploads, dashboard creation, embedded designer)	
Enhanced Reporting – Large (per org. Excel Uploads, dashboard creation, embedded designer)	
Symology Maintained Reports	
Options	
Licences & Events	
Publicly Hosted Attachment Service for Street Works	
Mobile Routing Facilities	
D-TRO 3 (Consuming – D-TRO Map Layer + Enquiry)	
D-TRO 4 Publishing TTROs (includes consuming)	
D-TRO 5 Publishing TTROs + TROs (includes consuming)	
Street Gazetteer (& ASD) Maintenance & GeoPlace Export	

SECTION 2 – DETAILED SUMMARY OF SERVICE

Import/Export of Datasets (FTP)	
Additional 25GB disc space per annum	
Bespoke Configuration Requirement – Small	
Bespoke Configuration Requirement – Medium	
Bespoke Configuration Requirement – Large	
Initial Mandatory Services	
On-boarding	☒
Project Management (Fixed Price) – Org's with Network >= 2400km	☒
Project Management (Fixed Price) – Org's with Network < 2400km	☒
Implementation Consultancy (Fixed Price) - Org's with Network >= 2400km	☒
Implementation Consultancy (Fixed Price) - Org's with Network < 2400km	☒
Other Additional Optional Services	
Street Works Data Migration Service	
Ordnance Survey MasterMap Updates	
Test System Refreshes	
Gazetteer Loads (per year per Authority Area)	
Training Services	
On-site Consultancy Services (per day)	
Office based Consultancy Services (per day)	
System Analysis/Design Services (per day)	
Development/Programming (per day)	
Street Works Online Service Package – SP5	
Street Works Online Service Package – SP10	
Street Works Online Service Package – SP15	
Street Works Online Service Package – SP20	
Street Works Online Service Package – SP25	
Street Works Online Service Package – SP30	
Street Works Online Service Package – SP35	
Street Works Online Service Package – SP40	
Street Works Online Service Package – SP50	
Street Works Online Service Package – SP60	

SECTION 3 – FUNCTIONAL BENEFITS

Functional Benefits

Fully compliant Street works solution

Symology's market leading Street Works solutions are fully compliant with all Street Works legislation and will continue to evolve in line with an ever-advancing Street Works landscape, giving confidence that statutory obligations can be met now and in the future. Permitting and noticing are both fully catered for, including facilities for the management of a Lane Rental scheme, inspection statistics and sampling, and automated Fixed Penalty Notice prompting, helping Authorities to ensure a high standard of works is taking place on their network. Additionally, automated charge prompting ensures a quick and efficient way to provide Promoters with their charges on either a weekly, monthly, quarterly or adhoc basis.

Features available:

- Noticing and Permitting for all UK legislation
- Street Manager integration (where applicable)
- Comprehensive conflict checking facilities
- Historical Street Works data
- Full inspections facilities including automated inspection sampling (where applicable)
- Full Non-Compliance facilities
- Fixed Penalty Notice issuing and reporting
- Charge definition and invoice production facilities
- Works Promotion and Traffic Management functionality
- Lane Rental management facilities
- Causeway One.Network (One.Network) integration (where required).

The full end-to-end lifecycle for permitting and noticing is catered for, including integration with the Street Manager Plan and Manage Roadworks solution where applicable, enabling the creation and transmission of both notices and permits in the required format.

Proven, comprehensive functionality for the coordination of all activities potentially causing disruption on the highway is provided, including but not limited to Utility and Highway Authority Works, Highways Act licences, other obstructions on the highway, and special events (such as sports fixtures, carnivals, markets and parades).

Both Street Works notices and permits are accommodated, as are all historical versions of Street Works notifications. Authority Works Promoters can access the same solution as their Traffic Manager, providing instant coordination with all other Works, assisting the Traffic Manager with coordination and minimising congestion. Instances where incorrect data is entered are highlighted immediately, offering the opportunity to correct the record before a works is raised. Furthermore, the solution identifies noticing failures by external Works Promoters, automatically generating Fixed Penalty Notices (FPNs) where required. These FPNs can be issued via Street Manager or EToN and reporting facilities are available for all FPNs.

SECTION 3 – FUNCTIONAL BENEFITS

Lane Rental scheme management facilities are included, providing instant visualisation of Lane Rental applicable works for review. Inbuilt workflows ensure distinction between permit and Lane Rental charges ensuring application of the correct charges to simplify management.

Extensive inspection and non-compliance functionality simplifies the recording, monitoring and sampling of inspections throughout the year. Automatic prompting of statutory inspections and associated follow-ups and the download of Street Manager prompted statutory inspections (Performance Based Inspections), alongside local inspection reporting as part of a regime, ensures that Authorities fulfil their predetermined sample statistics, and maintain high standards on their network.

Street Works charges including, but not limited to, Permit, FPN, Inspection, Overstay and Lane Rental can all be catered for, including automatic cost calculation ready for invoicing, avoiding a need for external spreadsheets. Additionally, pre-invoice templates can be used for charge reconciliation prior to producing a final invoice. Facilities are also included to efficiently manage Lane Rental charges alongside permit fees.

Following the introduction of Street Manager in England, an interface can be used to send and receive Street Works notices and permits from and to Aurora. This seamless integration between a Street Works system and DfT's Street Manager solution, provides an Authority with full Street Works and Licences & Events functionality whilst ensuring that Street Manager is updated in accordance with the latest legislation and Codes of Practice.

Map Driven Network Management Facilities

Network management and coordination is best facilitated via a holistic view of all activities through a mapping/GIS interface. With ESRI based GIS facilities at its core, the map-driven interface displaying pertinent data to assist with coordination, enables users to see all relevant activities for effective network management. The synchronicity between the mapping and activity records facilitates efficient working processes whilst Google Street View integration aids the streamlining of informed decision making.

Features available:

- Display of historic, current and future activities
- Defined symbology for ease of activity identification
- Holistic view of network occupancy
- Point, line, polygon plotting functions
- Diversion route plotting
- BS7666 National Street Gazetteer Level 3 compliance, including Associated Street Data (ASD)
- Google Street View integration
- Addition of other mapping layers, including Live Traffic, Aerial Photography
- Map sharing facilities, including Web Feature Service (WFS), import/export and ESRI collaboration.

SECTION 3 – FUNCTIONAL BENEFITS

Proven BS7666 National Street Gazetteer Level 3 compliance is standard and as an included service, Symology will import a Level 3 gazetteer on a monthly basis, populating the Street Gazetteer and linking it to the embedded mapping. Associated Street Data (ASD) including Ownership, Interested Parties, Reinstatement Designations, Special Designations and Height/Weight/Width Restrictions are linked to the Street Gazetteer. These are visible both textually using the enquiries and records and spatially via the mapping, showing the location and extent of the ASD.

The mapping/GIS facilities have been designed with clearly defined symbology allowing users to quickly and easily identify works, where context-sensitive info cards overlaying the map can provide narrative data. The symbology can be defined such that there is clear distinction between the types of works, such as Utility gas, electricity, water works compared with Authority Defective Apparatus, Road Restrictions, Licences, Events and Diversion Routes, making network management a simplified task.

Full coordination checks are provided to identify conflicting activities with overlapping dates in the same street, vicinity or on diversion routes. These powerful coordination facilities are built in to provide the Traffic Manager with full control of all works, submitted as either Permit Applications or Works Notices. As an activity is recorded, either manually or by an incoming notice, the Traffic Manager is immediately able to review potential conflicts, using the embedded GIS facilities.

The synchronicity between the map and the data provides quick, direct access to further detail about selected streets or activities. The dynamic integration between the mapping and data ensures that users can assess activity records and view them spatially at the same time. Users can also run enquiries and display the results on the map on an adhoc, per user basis, where parameters and filters can be defined to display only the records of interest.

Integration with Google Street View is available, enabling users to select a section of a street via the mapping and the Street View will be immediately displayed.

Additional mapping layers, such as Live TomTom Traffic and Aerial Photography, can be accommodated in order to enhance the decision-making process.

In order to share data, mapping layers can be made available to an external corporate solution, for example, via WFS integration. Such requirements can be discussed with Symology so as to determine the most efficient method.

Role Specific Permissions and Views

The user experience is both directed and enhanced through the use of role specific permissions, allowing intuitive views of the areas required. Defined spatial areas facilitate operation via wards, service areas, inspector patches in addition to organisational areas enabling multi-organisation operation in a single central solution, whilst retaining organisational distinction.

SECTION 3 – FUNCTIONAL BENEFITS

Features available:

- Role-based permissions for individual users or groups of users
- Extensive permission structure
- Tailored spatial areas
- Multi-organisation solution model for joint permit scheme and national usage.

Authorisations defined at either user or group user level, allow access to pertinent information and authorisation to perform actions for a user's role. The permissions structure enables clear distinction between roles, such as coordinators and inspectors with further granularity available to tailor authorisation. This additional configuration can distinguish between activity responses, activity creation, Fixed Penalty Notice issue and also inspections so that users can only perform activities applicable to them as required.

Spatial areas provide tailored views, giving visibility of activities within a pre-defined area. These geographical areas can be used to define Wards, Inspector Routes or Patches, Divisional Areas or Organisational boundaries. Combining the permission structure with the facility to define spatial areas provides Authorities with vast operational flexibility.

This functionality becomes even more powerful when operating in a multi-organisational solution allowing operational distinction both between Authority and Promoter, and between Authorities. Utilising geographical areas, multiple Authorities can operate collaboratively within a single solution whilst only responding to works in their own Authority area. In addition, Promoters are prevented from performing Traffic Manager functions on their own works.

Simple Workflow Navigation

Symology's Street Works solutions are designed with a user's journey in mind, facilitating simple navigation through activity lifecycles, presenting users with the appropriate options for progression, from both Traffic Manager and Works Promoter perspectives. This approach lends itself to efficient working processes, minimising the steps required to raise and progress activities.

Features available:

- Dashboard enquiries to monitor activities at stages
- User guidance through lifecycle
- Dynamic grids with instant access to activity records.

Dynamic dashboard enquiries provide an intuitive and visual representation for network management, where categorisation allows for easy identification of actionable activities. Users are able to navigate directly from these categories to the associated data list or to a specific record for further detail, before responding to or progressing as required. These categories also allow quick navigation to permits and notices, works and inspections at different stages, assisting in the management of the network. When viewing an activity, the next expected and available functions are presented to the user, so that it can be progressed through the lifecycle.

SECTION 3 – FUNCTIONAL BENEFITS

In addition to operational data, dashboards can be used to display high-level management information at a glance, such as sample inspection progress to date, inspection failure/non-compliance rates per Promoter and notice compliance failures. A default set of widgets can be configured based on a user role, providing immediate display of pertinent information.

Comprehensive Reporting Capabilities

Symology solutions focus not only on day-to-day functionality but also on providing easy access to that information without the need for technical expertise or complicated query languages. To facilitate this, a number of reporting options are provided which can relate to the needs and relative skills of different users. Multi-format reporting provides quick visibility of data for Permit Co-ordinators monitoring network occupancy to Heads of Service publishing data on changes of network occupancy over a twelve-month period.

Features available:

- Multi-parameter search facilities
- Saved views and layouts per user
- Data export and report production in XLSX, DOCX, PDF and CSV format
- Pre-defined operational and management Dashboards
- Production of nationally defined reports (TMA Performance Indicators, where required)
- Data transfer facilities for external reporting purposes
- Enhanced reporting options for advanced reporting tools.

A vast range of live, dynamic enquiries are available throughout, to cover operational requirements, each of which provides selection criteria and allows the results to be filtered as required. Further facilities are provided to define the precise data fields to be displayed alongside configurable highlighting rules. Column sorting, multi-level grouping and in-context instant filtering can also provide additional tailoring. These user defined views can be saved and set to be that user's (or groups of users') default view for repeated use. Typical enquiry uses cover due permanent reinstatements, overdue activity closures and outstanding defects, providing Authorities with tools to comply with their statutory obligations.

Data exporting options allow the results of enquiries to be exported in CSV, XLSX and Shapefile format alongside facilities to produce reports in XSLX, DOCX, PDF and CSV format. For those requirements which cannot be met by the embedded reporting functionality, data download or data warehousing can be facilitated. More complex specific bespoke reporting requirements can be discussed with Symology to determine the most appropriate method.

An extensive suite of out-of-the-box dashboards are included as standard for all users, some are aimed at monitoring high level key performance indicators whilst others are provided to assist in driving operational workflows. Direct drill down to the supporting data records is provided with all dashboard widgets.

SECTION 3 – FUNCTIONAL BENEFITS

Nationally defined reports are included as standard, such as Street Works Performance reports, where required.

Enhanced reporting options offer extended facilities such as formatted Excel spreadsheet population, dashboard and widget creation and report template creation.

Mobile Functionality for Remote Operatives

The simplest way to introduce instant efficiency savings is via mobile working for remote operatives. Symology's solutions provide role-based mobile functionality, thus ensuring remote operatives and inspectors remain out in the field for as long as possible, removing the requirement to visit the office to collect a printed list of due inspections or to return a completed set of inspections. Also including embedded mapping functionality, the mobile solution is designed to operate without the requirement for an "always-on" network connection. These offline capabilities ensure that operatives have full access to activity data, including dates, permit conditions, photographs and mapping, enabling inspections to be completed in areas with little to no network connectivity. This gives operatives the best of both worlds such that they can work dynamically when they have signal and offline when they do not.

Symology's Street Works and Licences & Events mobile facilities provide comprehensive functionality, including but not limited to the completion of Street Works or Licence inspections.

Features available:

- Seamless compatibility with the Street Gazetteer, Street Works and Licences & Events
- Fully compliant with inspections defined in Inspections Code of Practice
- Fully compliant with Non-Compliance including safety, reinstatement quality, sign, lighting & guarding.
- Licence inspection functionality
- Adhoc defect recording
- Comment and Fixed Penalty Notice recording
- Offline mobile working
- Mobile mapping availability, including offline use
- Routing facilities
- Allocation of inspections via spatial areas
- Addition of date and time stamped photographs
- Operation via Inspector Area or full area coverage
- Utilisation of GPS.

Mobile devices can be configured by role and geographical area, ensuring that the remote operative has access to their applicable inspections and activities. All types of inspections are accommodated, including locally defined inspections, as well as the ability to record defects found as a result of an inspection or any ad-hoc defects that are encountered. The

SECTION 3 – FUNCTIONAL BENEFITS

types of inspections that can be accommodated by the mobile solution include but are not limited to:

- Statutory Street Works Inspections and follow-up inspections
- Target based Street Works Inspections and follow-up inspections
- Defective Apparatus & Unattributable/Unattributed Works inspections
- Licence based inspections
- Locally defined inspections.

Promoter works-in-progress can be viewed via the mobile application where an inspector can check the status, including the permit status and permit conditions (where applicable), record adhoc inspections in addition to potential Fixed Penalty Notices and comments. Date and time stamped photographs can also be taken and attached to records so that they can be viewed both on the central system and by Promoters.

GPS enabled devices allow the map to be centred at the operative's location and tracking facilities are provided to trace the routes being taken. Route optimisation facilities, where included, can be enabled to provide the most efficient route for inspectors to maximise the time out in the field.

SECTION 3 – FUNCTIONAL BENEFITS

Management of Licences and Events

Authorities have a requirement to manage their networks, including not only Street Works but other activities which may impact the highway. Facilities to manage both Licences and Events, including but not limited to skips, scaffolding, events (such as sporting and music events), Section 50s and any associated diversion routes are available. Once recorded, these are incorporated in conflict checking for coordination purposes allowing Authorities to make informed decisions regarding activities taking place on their network and thus reducing impact for the public as much as possible.

Features available:

- Standard defined licence types, including skips, scaffolding, hoarding, Section 50s and events
- Plotting and recording of diversion routes
- Inspection facilities at different stages of activity
- Charge recording facilities
- Document production
- Inclusion in coordination and conflict checking to minimise impact
- Automatic communications to Works Promoters and/or members of the public.

Authority licence applications can be recorded and managed within the Street Works solution, where internal processes can be followed from the initial application, recording charges and inspections, in addition to associated diversion routes. Licences, events and diversion routes are displayed on the map and included in the comprehensive conflict checking to assist with minimising impact on the network. Non-standard licence types, such as Temporary Traffic Regulation Orders (TTROs), Hoarding, Street Cafés and Section 171, can also be catered for.

All types of Licences and Events can be accommodated with powerful facilities to enable the coordination, control, safety, network planning and financial issues that surround licence applications and other events on the public highway. Documents, inspections and timescales can be defined for each type of licence, ensuring that all varying requirements can be met, with facilities to record charges also available.

Licence applications can be monitored and inspected by remote workers via the mobile solution, where pre-prompted inspections can be made available to ensure the licensee is compliant with the terms of the licence and/or that the site has been left in an acceptable condition.

Aurora can also manage the consumption and publishing of Temporary and Permanent Traffic Regulation Orders (TTROs/TROs) via Aurora onto the Digital Traffic Regulation Order (D-TRO) service. The D-TRO service is an API only service that will allow you to do 4 actions; Create, update, delete and read all Traffic Regulation Orders that have been submitted to the D-TRO service, where these actions can be fully integrated with the Street Works and Licence applications. Packages are available for combinations of publishing and consuming D-TROs in line with customer requirements utilising the Bespoke Interface options, the package definitions are detailed below.

SECTION 3 – FUNCTIONAL BENEFITS

D-TRO 3 (Consuming – D-TRO Map Layer + Enquiry)

This option provides the display of all published D-TROs via a mapping layer for visibility of all D-TRO records in addition to a D-TRO enquiry to report on all consumed D-TROs.

D-TRO 4 Publishing TTROs (includes consuming)

This option includes all facilities in D-TRO 3 and provides the ability to create, manage and publish TTROs to the D-TRO service.

D-TRO 5 Publishing TTROs + TROs (includes consuming)

This option includes all facilities in D-TRO 3 and D-TRO 4 in addition to the tools to create, manage and publish TROs.

Channel Shift Web Portal solutions

Symology's Channel Shift Web Portal solutions enable the realisation of immediate efficiency savings by encouraging customers to interact almost directly with an Authority's system. Symology's Street Works solutions operate seamlessly with these web portals, significantly streamlining internal processes and reducing, what can be, unnecessary costly manual engagement. The web portals can display Street Works information to members of the public in addition to enabling Hire Companies to apply for licence applications, integrating with the Street Works solution without manual intervention.

Symology's single page web portal solutions have integrated mapping and use an HTML5 based responsive design, providing device agnostic portals which can be used on any device (Desktop, Tablet or Smartphone) with a modern web browser or even embedded into an Authorities own app. Furthermore, these solutions can be offered on a bilingual basis should an additional language be required.

Channel shift efficiencies can also be realised through customers' own portals interfacing directly with the Symology solutions using the Symology API for Street Works and Licences. This enables Authorities to publish Street Works data on to their own public facing website from the Street Works solution or enable Hire Companies to apply for licence applications via a corporate portal or application form, transmitting directly in to the Street Works solution.

Features available:

- Channel shift efficiency savings
- Public facing web portal to publish current and future activities
- Hire Company web portal to apply for licence applications
- Bilingual capabilities
- Device agnostic.

The ViewIt web portal solution is aimed at enabling members of the public to view current and future works in the Local Authority area allowing them to keep up-to-date with any activities potentially impacting the network and therefore their journey. The ViewIt Web

SECTION 3 – FUNCTIONAL BENEFITS

Portal can include, but is not limited, to details such as Works, Traffic Management and Diversion Routes (additionally charged).

Symology's ApplyForIt web portal solution is designed so that pre-registered Hire Companies can apply for Licences from their Local Authority for placing items on the Public Highways including but not limited to Traffic Regulation Orders, Skips, Scaffolds and Building Materials. Offering configurations such that Licence applications are automatically fed into Aurora, removing dual entry by Authority users. This includes facilities which show previously recorded applications on the web mapping portal and the current status of each. Further facilities are provided to send status updates back to the web portal and emails back to the Hire Companies, reducing the number of calls and manual emails required with Hire Companies.

An additional option within ApplyForIt Portal is PCI DSS compliant payment integration allowing Works Promoters, members of the public and Authorities the option to make a payment via the portal, working alongside Aurora to update and progress the Street Works and Licence application within Aurora and sending updates throughout the process to the requesting parties.

SECTION 3 – FUNCTIONAL BENEFITS

Core Functionality

Street Works for Traffic Managers & Works Promoters

Symology Street Works provides comprehensive functionality for the coordination of all activities which could potentially cause disruption on the highway, including Utility and Highway Authority Works, Highways Act licences, other obstructions on the highway, and special events, such as sports fixtures, carnivals, markets, parades etc. Aurora is compliant with all Street Works legislation, enabling transmission of data in the required format, including Street Manager and EToN.

Both Street Works Notices and Permits are accommodated as are all historical versions of Street Works notifications. The system has powerful coordination facilities built in to provide the Traffic Manager with full control of all works, submitted as either Works Notices or Permit Applications. As an Activity is recorded, whether by an incoming Street Manager or EToN notification, the Authority's own Works Department, a Highways Act licence application, or a special event, the Traffic Manager is immediately able to review potential conflicts, using the embedded GIS facilities. Potential conflicts are shown where works with overlapping dates occur in the same street, within the vicinity of other works, diversion routes and in user-defined Co-ordination areas.

Statistical analyses of performance, over specific time periods, are available as required. However, the unique benefit of Aurora is the wide range of flexible, in-built enquiries, providing instantaneous exception reporting. The enquiries are user configurable, without technical assistance, with immediate onscreen output.

Sophisticated reporting tools are provided, which provide all the exception reports required to monitor the progress of Street Works Notices, Permits, Defects and Fixed Penalties. The results of these enquiries can be exported in CSV, XLSX and Shapefile format in addition to facilities to produce reports in PDF, XLSX and DOCX format. The Street Works solution accommodates all the various mechanisms that are used to provide the incentive for speedy and efficient completion of works, such as street occupancy rental, overstay charging, and remedial works or inspection failure penalties.

All of these options are provided, in addition to charging policies for notices/permit applications, Lane Rental and statutory inspections. An integrated charging function, with manual adjustment facilities, enables street authorities to produce accurate, substantiated invoices, and helps works promoters monitor and minimise costs.

Authority Works promoters can access the same system as their Traffic Manager, providing instant coordination with all other Works, assisting the Traffic Manager in the coordination of works and minimising congestion. Instances where incorrect data is entered are highlighted immediately, offering the opportunity to correct the record before a notice is transmitted and avoid penalties.

SECTION 4 – OTHER SERVICES/FACILITIES

Other Services/Facilities

Live/Test Systems

Each customer is provided with two systems as standard – Live and Test. Additional solutions can be added as required basis (see Options below for Additional Solutions/Environments).

The Test system will be a data-lite version of the Live system and is commonly used to review new facilities in order to incorporate them into business processes and operating procedures with a view to maximising their benefit. In addition, to train end-users, familiarising themselves with exciting new facilities and enhancements.

Test system refreshes

The test system can be refreshed with data from the live system upon request (see Options below for any data refreshes).

Causeway One.Network (One.Network) Interface

Where required, a Causeway One.Network (One.Network) interface can be set-up and maintained so that Street Works data from Aurora can be fed into Causeway One.Network (One.Network). This service includes the set-up and maintenance of the interface by Symology.

For England, Symology consumes the available Street Manager Open Data for inclusion within the solution for co-ordination and conflict checking purposes, particularly for activities impacting a Council's boundary.

MasterMap Updates

As part of the standard service, Ordnance Survey MasterMap layers are kept up-to-date via an interface to an ESRI ArcGIS Online Mapping service.

Disc Space

A burstable limit of 150 GB of disc space is provided for object and document storage as part of the standard service. This amount of disc space should prove to be more than sufficient for most customers (even large County Councils). However, if more disc space is required this limit is not fixed and will not cause system failures. In such circumstances the Symology Managed Services team would contact the customer to ascertain whether additional disc space is required on an on-going basis (see Options below).

Street Works – Hosted EToN Communications (where required)

Where required, Symology can provide and manage all of the necessary technical facilities for the sending/receiving of Street Works EToN transactions.

Symology Conference

The Symology Conference is for all existing Symology customers and is a free event held over two days; one in the South, one in the North. Customers represent both Authority and Utility users who are welcomed to network within the Symology community in addition to sharing best practice processes and keeping up to date with all the latest industry and software product news.

SECTION 5 – OTHER OPTIONS

Other Options

Multi-Authority Licence

Symology Street Works can operate as a multi-Authority solution enabling it to be used as a national Street Works solution, a multi-Authority solution (Bi-Borough/Tri-Borough) or as an Authority Traffic Management and Works Promotion solution. Aurora contains appropriate rules to define access and authorisation as standard to ensure effective operation across these models, which have been successfully in operation across Symology's customer base for a number of years.

The configuration for access and authorisation coupled with defined spatial areas guarantee visibility of the correct activities including the ability to respond to or progress those activities for that user role.

Additional Systems

Whilst Live and Test systems are provided as standard, additional Production and Sandbox systems can be made available as required and will be a cut down version of the Live environment.

Enhanced Service Level

Symology has a standard Service Level applied to the solution, which is detailed in Section 20. Where the customer requires an enhanced level, this option should be selected.

Single Sign-On (SSO)

A Single Sign-On option can be added to the solution on a per Organisation basis. Where Single Sign-On is added, Users receive an activation email following the creation of their account and can log in to the solution using their existing credentials.

Customer Service Direct Interface (Web Reporting Portal Use)

The Customer Service Direct Interface is available for use alongside the web portals. Symology can advise where this option is required dependent on the web portal selected.

Street Works & Licences Interface

A Street Works & Licences Interface can be provided to integrate the Symology Street Works solution with an Authority's own website. This option can be used to publish Street Works data on the Authority's website for members of the public, or to enable integration with a licence application form or Hire Company portal. This provides the capability to publish current and future Street Works to a corporate site and to receive applications for Licences (such as Temporary Traffic Regulation Orders, Skip and Scaffold) into Aurora in

SECTION 5 – OTHER OPTIONS

real-time using Web Services technology. This option may also require the Customer Service Direct Interface, which will be advised by Symology.

The charge for this option includes a combination of software charges plus technical set-up and monitoring of the interface but is exclusive of any assistance that may be required from Symology by the third-party system suppliers in understanding how to use the standard interface or to provide any assistance with testing the interface. Any such requirement would be charged at normal service rates (see below).

Corporate Finance Interface

Aurora provides a wealth of standard facilities which are used to manage and monitor finance, including facilities to record charges for Street Works and Licences.

This interface provides the customer with the capability of interfacing with their corporate finance system, so that financial transactions managed within the solution can be reflected in the corporate solution.

Symology provide a standard interface format, however this is typically required to be modified to suit the specific corporate system being interfaced with. Should these changes be considered excessive, they may carry an additional charge at normal service rates (see below).

Bespoke Interface Hosting/Monitoring – Small, Medium or Large

Due to the breadth and sheer versatility of Aurora, there is very occasionally a requirement for an interface which is not provided “off-the-shelf” as a standard product. This option is therefore provided to cover for any unforeseen interfacing or data import/export requirements which may arise.

This option is available at three levels – Small, Medium and Large. Symology will advise the customer as to which level of product should be ordered following an assessment of the bespoke requirement. This option is used for integration with the DfT Street Manager solution in England.

The charge for this option includes any required software products, the initial set-up and the ongoing monitoring of the bespoke product.

The charge does not include any requirement for System Analysis, Programming, Project Management or Implementation services. These requirements would be charged at normal service rates (see Other Option Services below).

Live TomTom Traffic API

A Live Traffic mapping layer provided by TomTom is available to include with the solution to enhance decision making.

SECTION 5 – OTHER OPTIONS

Web Portals

A range of public facing, map-based web portals are available to share information with members of the public and facilitating a self-serve approach. The web portal options include ApplyForIt and ViewIt. ApplyForIt is aimed at Hire Companies and Applicants, allowing them to make licence applications online, with an additional option for payment integration. ViewIt publishes current and future network occupancy activities, including Street Works and Licences to the public, with additional options for the presentation of diversion routes and historic works.

Additional web portal environments and add-ons can be included, such as additional languages for bilingual portals as required.

It is important to note that the ApplyForIt solution requires Symology's Licences & Events, the Licences Direct Interface, Customer Service and the Customer Service Direct Interface as a pre-requisite. It should also be noted that Symology's Consultancy Services would be required in order to plan and implement this solution.

The web portal charges do not include any requirement for System Analysis, Programming, Project Management or Implementation services. These requirements would be charged at normal service rates (see Other Option Services below).

Map Sharing (GIS)

The Map Sharing option provides the customer with the facility to locally consume or serve the mapping layers between the Street Works solution, for example, in real-time by means of Web Feature Services.

Map Sharing can be facilitated in a number of different ways, where Symology can advise on the most appropriate method for the requirement. The options include the use of a Corporate GIS interface using Web Feature Services (WFS), an ESRI collaboration tool and a layer import/export.

The charge for this option includes a combination of software charges plus technical set-up and monitoring, however configuration is charged separately.

It should be noted that a "fair usage" policy applies to this option. For example, it would not be deemed fair usage for the customer to have local systems configured to consume Ordnance Survey MasterMap layers on an on-going basis.

Advanced Reports Licences

Symology provide a number of standard reports and reporting facilities within Aurora which can be used by all customers, however in order to schedule additional Saved View reports, an advanced reports licence is required.

Data Download and Data Warehouse

SECTION 5 – OTHER OPTIONS

The Symology Street Works solution contains numerous different reporting methods, enabling the vast majority of reporting requirements to be met directly from within the solution.

Customers may require access to data for alternative reporting purposes and Symology can make customers' data available to them for their own, local reporting purposes. Data can be made available via two options; Data Download and Data Warehouse. The Data Download option facilitates the provision of a download of data on a regular basis, for example nightly. The Data Warehouse option includes provision of a geo-replicated version of the data for use with external reporting solutions such as PowerBI. These more complex specific bespoke reporting requirements can be discussed with Symology in order to determine the most appropriate method.

Bespoke Reporting Package – Small/Medium/Large

It is common for organisations to require additional reports over and above the standard reports provided, therefore, this option offers the facility for customers to have specific reports written and maintained for them. Examples of these reports can include, but are not limited to:

- Weekly Roadworks Bulletin
- Performance Reports for notice/permit response times
- Daily Deem report
- Daily Transmission Failure report.

Furthermore, these reports can be configured to run via a scheduled process to be sent to selected recipients at a defined frequency.

This option is available at three levels – Small, Medium and Large. Symology will advise the customer as to which level of product should be ordered following an assessment of the bespoke reporting requirement.

Enhanced Reporting (Small/Medium/Large)

Whilst the standard reporting options satisfy a large proportion of requirements, the enhanced reporting option can be added to provide further reporting tools.

The packages are categorised as small, medium and large to cater for the specific requirements and features needed on a per organisation basis.

The Enhanced Reporting option provides organisations with enhanced reporting tools over above the standard features of grid enquiries, Saved Views and report scheduling. This option includes three enhanced features; Excel Uploads, Dashboard creation and Embedded Designer.

SECTION 5 – OTHER OPTIONS

The Excel Uploads provides users with the option to upload an existing Excel template into the solution including graphs, into which data can be exported to automatically populate the defined template. The Dashboard creation tool provides the option for users to create both their own dashboards and dashboard widgets. The Embedded Designer tools offer the capability to write reports, such as reports in PDF format, for use by any user.

Symology Maintained Reports

Symology's expertise includes report writing and maintenance which can be selected by organisations without the inhouse skills for report writing. The writing of reports is facilitated via the standard consultancy costs, and this option should be selected to maintain these reports in line with any new software updates.

Licences & Events

The Licences & Events function provides powerful facilities which enable all the co-ordination, control, safety, network planning and financial issues that surround licence applications and other events on the public highway to be managed effectively. Facilities also include the ability to record road closures and associated diversions, with integration to the Digital Traffic Regulation Order (D-TRO) service (charged separately).

Publicly Hosted Attachment Service for Street Works

Symology Street Works solutions provide the facility to send attachments from Highway Authorities to Works Promoters, particularly for inspections and Defective Apparatus reports, and for justifying the imposition of FPNs, overstay charges, etc. This option provides a "one-stop" service to send Street Works attachments via EToN, including all the related software and the technical infrastructure outside of the sending organisation's firewall, holding the attachments as part of the Symology Street Works solution.

Mobile Routing Facilities

Mobile routing facilities can be enabled, where available, providing remote operatives with the most efficient route between their allocated inspections.

D-TRO Packages

The D-TRO service is an API only service and packages are available for combinations of publishing and consuming D-TROs in line with customer requirements. The package definitions are detailed in Section 3.

Street Gazetteer (& ASD) Maintenance & GeoPlace Export

A comprehensive suite of tools is provided for maintaining a Level 3 National Street Gazetteer including the spatial data element of the Gazetteer.

SECTION 5 – OTHER OPTIONS

Associated Street Data, such as Reinstatement Designations and Special Designations can also be plotted (manually or in bulk-plot mode) and maintained. This includes the ability to define offsets from the road centre line.

The files for NSG Level 3 and ASD data submission can be exported with a single-step-process in a format ready for delivery to the NSG Custodians.

In order to ensure that changes being made in-between submissions to GeoPlace are not reflected immediately in the live operational system, the Gazetteer Maintenance facilities are provided in a separate database. This ensures that the Local Authority and Utilities are not operating on different data sets for Street Works purposes. As part of the solution provided by Symology, the gazetteer in the live operational system will be updated monthly by Symology's Managed Services Team using the latest Gazetteer and ASD data available via the GeoPlace portal.

Additional 25GB Disc Space per Annum

This option can be utilised if the customer requires more disc space than that which is allocated with the standard service.

Bespoke Configuration Requirement – Small/Medium/Large

Owing to the vast flexibility of the solution, bespoke configuration requirements can be made and would most commonly be used for multi-organisation solutions whereby the configuration needs to be more tailored to the requirements of multiple organisations. Examples of bespoke configuration requirements include but are not limited to:

- The tailoring of mapping layers and definitions for different organisations
- The configuration of separate Licence and Events types
- The creation of local rules and charges at organisational level.

This option is available at three levels – Small, Medium and Large. Symology will advise the customer as to which level of product should be ordered following an assessment of the bespoke configuration requirement.

SECTION 6 – INITIAL SERVICES

Initial Services**On-boarding**

A fixed price will apply to the on-boarding process (see Section 14 below).

Project Management

A fixed price will apply to cover all Project Management activities required from the outset of the Project up to the point of going Live. Symology's Project Managers are PRINCE2 accredited.

Two fixed price cost options are provided for Project Management activities. The higher charge applies to organisations with a total Highway Network length of 2,400km or greater. The lower charge applies to organisations with a total Network length lower than 2,400km.

Implementation Consultancy Services

A fixed price will apply to cover all Implementation Consultancy Services required from the outset of the Project up to the point of going Live.

Two fixed price cost options are provided for Implementation Consultancy Services. The higher charge applies to organisations with a total Highway Network length of 2,400km or greater. The lower charge applies to organisations with a total Network length lower than 2,400km.

Other Optional Services (may be chargeable)

Street Works Data Migration Service

Symology has previous experience with migrating Street Works data from other EToN systems. Our preferred method for migrating EToN data is to be provided with all the EToN XML and Text files since the introduction of EToN 1. Following the introduction of Street Manager in England, where applicable Symology will back-load the DfT Street Manager data in addition to EToN data. Symology then organise these files into date sequence and load them into the system. If the XML or Text files are not available then we would issue the existing supplier with a specification to output the data in the required formats (replicating the data that would have been in the XML and Text files).

When loading the data, reports are generated to highlight any errors or warnings. Following the first load we would demonstrate to the customer the success (or otherwise) of the initial load, in order that agreement can be reached with regards to amending validation rules for certain scenarios – to overcome any problems that arise.

Following this, we would make the necessary adjustments and re-run the data load process, after which we would again demonstrate to the customer the latest results.

Ordnance Survey MasterMap Updates

As part of the standard service, Symology will apply regular updates of Ordnance Survey MasterMap layers to the Live mapping system.

If for any reason any additional MasterMap updates are required then additional updates will need to be ordered.

Test System Refreshes

In order to update the data in the test system, a test system refresh can be performed, copying data from the live system.

Should there be a requirement for a test system refresh, then this option will need to be ordered.

Gazetteer Loads (per Year per Authority Area)

If the Gazetteer Maintenance functions provided with this solution are used then there will be no requirement to load gazetteers into the system on a monthly basis. However, if the Street Gazetteer is maintained by another third-party system then this option must be ordered by the customer. As part of this option, Symology will:

- Load the datasets into the solution
- Generate new spatial layers based on the updated data

SECTION 7 – OPTIONAL SERVICES

- Generate new spatial layers for the mobile solution.

Training Courses

Symology's e-learning suite is available online where customers can log in and participate in training courses, at their own pace. Additionally, where applicable, hands-on training can be delivered.

Hands-on training courses can be delivered at Symology's Training Centres in Sheffield and/or Dunstable (Bedfordshire). Alternatively, on-site training or remote training can be provided. Where applicable, Symology are also able to deliver bespoke, tailored training.

Symology can advise as to the most appropriate training option based on the number of users and previous user experience.

On-site Consultancy Services (per Day)

Symology has vast experience in providing software solutions to Local Authorities in addition to the associated services to ensure effective use of the functions available on an on-going basis. Consultancy services can be provided on-site, which are inclusive of travel and normal expenses (locations in England, Wales and Scotland, excluding Highlands and Islands).

Office based Consultancy Services (per Day)

Symology has vast experience in providing software solutions to Local Authorities in addition to the associated services to ensure effective use of the functions available on an on-going basis. Consultancy services can also be provided where the work will be carried out at Symology Offices rather than on-site.

System Analysis & Design Services (per Day)

This item should be ordered to cover for any requirement for on or off-site System Analysis & Design Services. Such services would normally only be required if bespoke interfaces are required.

Development/Programming (per Day)

This item should be ordered to cover for any requirement where our development team will be required to write new code or scripts. It is envisaged that this service would normally only be required if bespoke interfaces are required.

Service Packages

The Service Package is either a yearly or a one-off package which provides the Customer with Training and Consultancy Services up to a pre-defined value. There are ten levels of service packages, as defined below.

SECTION 7 – OPTIONAL SERVICES

Package Name	Annual Charge	Consultancy/Training Service Credits to the Value of
SP5 (Annual)	£5,000.00	£5,500.00
SP10 (Annual)	£10,000.00	£11,000.00
SP15 (Annual)	£15,000.00	£16,500.00
SP20 (Annual)	£20,000.00	£23,000.00
SP25 (Annual)	£25,000.00	£28,750.00
SP30 (Annual)	£30,000.00	£35,100.00
SP35 (Annual)	£35,000.00	£41,300.00
SP40 (Annual)	£40,000.00	£47,200.00
SP50 (Annual)	£50,000.00	£60,000.00
SP60 (Annual)	£60,000.00	£72,000.00

The package provides a credit for any combination of Consultancy/Training services at the standard consultancy and training rates. Any remaining credit on the service package at the end of each year will not be carried over. Any remaining credit on the service package at the end of the contract will not be reimbursed. It is the customer's responsibility to ensure that they will be able to utilise all of their service credits in time.

SECTION 8 – COMPLIANCE

Compliance

Symology Street Works solutions are fully compliant with legislation in both England and Wales, including:

- The Technical Specification and Code of Practice for the Electronic Transfer of Notices (EToN) v6.0
- Code of Practice for the Co-ordination of Street Works and Works for Road Purposes and Related Matters (3rd Edition August 2009)
- Code of Practice for Inspections (2nd Edition July 2004)
- BS7666 National Street Gazetteer (DTF 8.1)
- The Street and Road Works (Amendments Relating to Electronic Communications) (England) Regulations 2020.

Symology's Street Works solutions are Public Cloud SaaS implementations (according to the NIST definitions) of the Symology software suite. Hosted within the United Kingdom, the service allows subscribed users to initialise access to the software suite over the public Internet.

APIs are available to integrate external systems with the service – these APIs are documented as part of the comprehensive online help system/knowledgebase and are supported through the regular service management process.

The service is available both to Local Highway Authorities and private sector companies providing services to Local Highway Authorities.

Accessibility

Symology solutions are specialised mapping-based applications rather than traditional HTML web pages and are designed with accessibility in mind. Whilst Symology solutions are not accessed by members of the public, consideration is given to WCAG standards when designing the solutions. Furthermore, the WAVE tool is used during the development phase. Solution accessibility features include the ability to operate with screen reading software, such as JAWS, alternative text and operation with minimal use of a mouse aiding people with visual and motor impairments. These facilities are in line with the requirements of the Disability Discrimination Act, and the W3C's Accessibility Initiatives. Additionally, many modern browsers provide a number of accessibility features as standard and Windows 11 provides "Ease of access" tools, which can be used in conjunction with our solution.

SECTION 9 – OPEN STANDARDS

Open Standards

Symology's Street Works solution complies with a wide range of open standards. These include technical standards such as the ability to export data/reports in PDF and CSV formats as a standard feature. In addition, a wide range of web services and REST APIs are available with the products, which comply with open W3C standards. The ESRI based GIS system embedded within our software is also OGC (Open Geospatial Consortium) compliant.

In addition the software meets and complies with the following industry related "open standards" – these include:

- BS7666 National Street Gazetteer (DTF 8.1)
- The Technical Specification for the Street Works Electronic Transfer of Notifications (EToN) - Versions 4, 5 and 6
- The Street and Road Works (Amendments Relating to Electronic Communications) (England) Regulations 2020
- Street events Data Exchange Protocol (SDEP).

SECTION 10 – INFORMATION PRINCIPLES

Information Principles

The service provides many features that are in alignment with His Majesty's Government Information Principles.

Aurora is hosted within the United Kingdom via Microsoft Azure. Symology and its hosting provider are ISO 270001 accredited. As such a range of information management best-practices are applied throughout the lifecycle to ensure appropriate availability and integrity, to avoid exposure and loss, and to ensure continuity across technology upgrades. Of course particular importance is placed on ensuring that personal or sensitive data is adequately protected. In order to apply these best practices an organisation culture has been established to ensure that all staff are adequately trained and are skilled in managing the effective and efficient use of information in a way that enables a customer to achieve its goals.

Symology's solutions have been used for many years by a high number of Local Authorities to hold and use data that is used, in a court of law, to defend third-party liability claims from members of public. The data that is used for these purposes is stored in a consistent and standardised manner, with full auditing facilities to ensure that the data is not tampered with after the event.

A range of interfaces (XML/REST) are available with the product. These interfaces are designed to ensure that access is only ever provided to the relevant data. Some of these interfaces are particularly aimed at providing information to members of the public – such that a self-service approach can be provided.

Information throughout the system is stored in a consistent standardised manner, and as mentioned in Section 9 (Open Standards) a wide array of open standards are supported and utilised.

The design of the system follows the Write Once Read Many (WORM) philosophy and there are many areas of the system where data is re-used for difference purposes – for example physical asset data is stored centrally but re-used for inspections, and reporting. This is just one of many examples that exist within the product range to help avoid multiple sources of the same information being held within a customer organisation.

SECTION 11 - GREENING GOVERNMENT

Greening Government

As an ISO 14001 accredited organisation, Symology is committed to minimising the impact of its daily operations, products and services on the environment. Symology applaud the Greening Government ICT Vision, and is already well on the way to meeting the objectives of this vision.

The Management of the Company recognises that its activities have environmental impacts and has developed a range of policies to manage environmental issues properly.

These policies have the full support of the Symology Management Team, who in implementing this commitment to manage our environmental impact properly will:

- Fully comply with environmental regulations.
- Ensure that environmental considerations are integrated into our business decisions.
- Actively pursue opportunities to minimise the environmental impact of our operations, concentrating particularly on the use of energy, carbon emissions, recycling and waste disposal.
- Actively pursue opportunities to minimise our customers' environmental impact in their use of our products and services.
- Attempt to develop a wider understanding of environmental issues among our suppliers and employees.
- Regularly review our policies to ensure that they remain properly aligned to the need to reduce waste and encourage the most effective utilisation of scarce resources.
- Try to make continual improvements.

Symology's products provide a wealth of facilities which enable our customers to operate more efficiently and more environmentally friendly. Examples include:

- a comprehensive suite of mobile working solutions, with facilities to prevent repeat visits to the same sites
- facilities to analyse inspector routes to ensure that work is being carried out in the most efficient manner
- work allocation facilities based on geographic areas / skill sets
- all reports/documentation that can be generated from within the system can be generated in electronic format i.e. PDF, and standard system facilities are provided to e-mail these documents rather than print them.

In addition, our technical infrastructure is completely virtualised - ensuring that computing resources are maximised across all customers – whilst minimising wastage and reducing emissions at the same time.

Symology is committed to a process of ongoing review to ensure that its policies, products and services are as environmentally friendly as is possible.

SECTION 11 - GREENING GOVERNMENT

Symology's strategy also includes working towards Net Zero by 2050 and we have instructed an external Consultant to work with us on this objective. We have reviewed our carbon footprint and have been actively introducing initiatives as we work towards our target.

SECTION 12 – INFORMATION ASSURANCE

Information Assurance

The service holds public data relating to Highway Authority operations – that is to say, data that is or could be subject to a Freedom of Information request or which is required to be published under the New Roads and Street Works Act 1991. As such, the broad range of data would be subject to IL0.

There are two potential exceptions:

- Names and telephone numbers of individuals within Works Promoter organisations may be included in Street Works notices. This contact information would be subject to a Data Protection exemption from publication under the Freedom of Information Act (FOIA), and customers may consider these as data subject to IL1.
- Information on some Street Works notices may be marked by a Works Promoter as “restricted” as defined by the Code of Practice for the Co-ordination of Street Works and Works for Road Purposes and Related Matters 3rd Edition (note this has no equivalence to a Protective Marking of “RESTRICTED”). Customers may consider these as data subject to IL1.

If these exceptions are considered as data subject to IL1, customers will need to complete their own internal assurance procedures as they would for any non G-Cloud procurement.

It should be noted that Symology and its hosting supplier are ISO 27001 accredited.

Symology is also Cyber Essentials Plus accredited.

SECTION 13 – BACKUP & DISASTER RECOVERY

Fault Tolerance, Backups and Disaster Recovery

Aurora operates via Microsoft Azure, which has defined processes for fault tolerance, backups and disaster recovery.

For Microsoft Azure, the two Azure regions used are UK South and UK West, where UK West operates as a disaster recovery environment for solutions hosted on UK South.

Microsoft Azure provides two backup mechanisms:

- An incremental geo-replicated backup every 1 hour (to a different region)
- A log-based backup every 10-15 minutes (within the same region)

Backups are retained for 35 days, allowing a “Point in Time Restore” (PITR) to any point in time within the last 35 days.

Symology’s dual hosting site passive/active model offers a high level of **business continuity** when dealing with **disaster recovery**. It is Symology’s responsibility to test, validate and ensure the service is up and running and capable of meeting the defined SLA.

Symology reserve the right to limit the service to core functionality required for the business. Criticality of functionality would be established during the initial Service Mobilisation.

Depending on the reason for the failure of the service, access to the service may be via a different IP address. This would still be via the standard IP address range provided within the standard technical connection documentation. However any hard-coded uses of IP addresses by the Customer may need to be changed at short notice.

On-boarding / Off-boarding Processes

On-boarding Process

Upon contract signature and receipt of a Purchase Order, the on-boarding process begins, operating via a PRINCE2-based project management methodology.

Whilst every implementation project is different, Symology utilises a standard approach for each project that is delivered. An implementation would follow the same process, from initiation through to go-live.

For every implementation, a project initiation meeting is held at the start with the project team to discuss key project requirements with stakeholders and data owners. This also includes determining project controls and identifying project success criteria, through which the project is managed. Following this meeting, a project plan is produced, detailing key tasks, resources, milestones and dependencies.

Throughout the project, regular project management meetings will take place, where progress will be reported in addition to reviewing risks recorded via a standard versioned RAID (risks, assumptions, issues and dependencies) log.

Where a project is delivered via a phased approach, each phase has its own phase initiation meeting, which would include relevant departments to determine the precise requirements and expectations, including but not limited to data migration and interface requirements.

For data migration, our general approach is to carry out a detailed analysis of the data required for migration and agree the recommended approach for each dataset. Data migration to the new solution can include, but is not limited to, geographic areas or patches, defect codes, expenditure codes, schedules of rates, inspection types and frequencies, asset types and attributes, customer service request types and historic street works. A solution is commissioned and the agreed datasets are migrated following which a proof of concept is presented to all key stakeholders.

User Acceptance Testing is completed by solution area specialists who are involved in the configuration and proof of concept development. Upon sign off of User Acceptance Testing, training for the appropriate solution areas is completed by end users in preparation for the solution Go-Live.

Off-boarding Process

At the termination of the contract Symology will make all data available in CSV format for input into any new system. Symology's own schema will be utilised. This data will be available via sFTP for a period of 3 months from the termination of contract.

SECTION 15 – PRICING

Pricing

Pricing can be found in the associated “G15 Symology Street Works Cloud Edition Pricing” document.

Free Trial

It should be noted that free trial has been selected to facilitate access to a technical connection test rig rather than enabling functional system use.

SECTION 16 – SERVICE MANAGEMENT

Service Management

Definitions

Account Manager shall mean the Symology Consultant assigned to manage the strategic and commercial relationship with the Client

Application Administrator shall mean the principal contact (and/or deputies) who is nominated by the Client to liaise with the Hosting Support Team on all issues related to the on-going use of the Service.

Application Software shall mean software developed by Symology or approved third party software suppliers, which is licensed for use by the Client in accordance with the Service.

Core Service Hours shall mean the times defined in the Service Card, during which the pre-specified level of Service Availability will be provided.

Hosting Centre shall mean the secure external data centre where the servers are located.

Hosting Support Team shall mean the Symology staff responsible for the optimised management of the Service.

Incident shall mean a problem of usability, hardware or software failure, registered with Symology's Hosting Support Team.

Maintenance Window shall mean the period defined in the Service Card, during which the service is routinely unavailable to allow for system maintenance activities.

Planned Outage An outage, requested by the Hosting Support Team, notified to the Application Administrator in advance of the event.

Service shall mean the provision of the Symology service to be provided to the Client.

Service Availability shall mean that the Service is working as described and can be accessed remotely.

Service Card shall mean the definition of various service parameters.

Service Levels shall mean the level of service availability which the Supplier will provide to the client.

Service Period shall mean the period over which service availability is calculated.

Service Plan shall mean the particular implementation of the service for the client as defined.

SECTION 16 - SERVICE MANAGEMENT

Unplanned Outage A complete loss of the Service, of which the Application Administrator has not been notified.

SECTION 16 – SERVICE MANAGEMENT

Service Management

Service Scope

During implementation of the Service, Symology will produce a Service Plan in agreement with the Client. The Service Plan will define in more detail the frequency and nature of the implementation, such as scheduled processes, system interfaces and bespoke developments/reports. It will also include details of the Application Administrator and nominated deputies.

Following implementation Symology will maintain the Service Plan, which will be available on request. If Symology make any material changes to the Service Plan which may affect the Client's use of the Service, then a revised copy of the Service Plan will be sent to the Client in a timely manner.

Roles & Responsibilities

Symology Ltd takes overall responsibility for ensuring that the Service is provided to the agreed level. Symology will ensure that only the necessary level of access is provided to its personnel who are required to maintain and support the Service.

The Client will, and will procure that its employees will, agree to abide by the terms of use of the Service as defined in the Agreement. Misuse or abuse of the Service may result in the Service being made unavailable to the Client or individual users indefinitely.

The Client must ensure that only those users authorised to access the Service attempt to use it.

The Client must also ensure that the service is being used appropriately and in the manner for which it is licensed.

The Client must nominate a contact person to assume the duties of "Application Administrator". Appropriate arrangements for deputies must also be made.

The Client must notify Symology of any changes to the nominated Application Administrator(s) and deputies, and any changes to their contact details.

The Application Administrator(s) will be required to attend all Symology training courses that are necessary for the on-going successful implementation of the Application Administration role, as defined by Symology.

The Client agrees to comply with all of the Hosting Support Team's reasonable instructions concerning the usage, modification, control and testing of the Service and to take all reasonable steps to ensure that the Client's employees are adequately trained in the correct use of the Service.

SECTION 16 – SERVICE MANAGEMENT

The Client must notify Symology if there are any changes to their business practices which are likely to have a material effect on their use of the service.

The Client must provide the necessary technical infrastructure to allow their users to access the Service.

The Client must notify Symology if they intend to perform any actions which could reasonably be expected to have a wide-ranging detrimental effect to the performance of the Service.

Security

Access to the servers is not available to Symology owing to its hosting provider. For solutions hosted by Microsoft Azure, Symology staff do not have physical access to the Servers.

Access is restricted to authorised workstations and users on the Symology network, connected securely to Microsoft Azure. Only a limited number of network protocols will be allowed to communicate between the workstations and remote servers e.g. RDP, HTTPS. Access is via username and password. The issue and update of all passwords is subject to a strict procedure.

All logons to the servers are audited.

Access to the Service is mediated by a Firewall. Servers are hidden behind a firewall in a “private ip address space”. Servers and routers are segregated in Virtual Networks (VNet). Network security features include multi-level privileges and OS lockdowns and device change logs.

Users will initially login to the Service via a link in an automated email requiring the user to define their password. The password creation is coupled with Multi-Factor Authentication (MFA). It is the user’s responsibility to ensure that their password is secure and should they suspect their password has been compromised; it is their responsibility to effect a password change.

If it is believed that a user is not conforming with reasonable password confidentiality Symology reserve the right to suspend the user account or services accessible by that user.

Access to the Service is monitored. Details of this cannot be made available for security reasons.

All servers allocated to delivery of the Service have **Anti-Virus** software installed as standard, which operate continuously and are regularly monitored.

Virus definitions will be reviewed daily for updates.

SECTION 16 – SERVICE MANAGEMENT

All unnecessary on-line services and software are removed from the solution servers. Specific details of these cannot be made available for security reasons.

Service Monitoring

Server Performance is automatically monitored for CPU, memory, disk and network usage, and alerts sent to the Hosting Support Team if limits are exceeded. The usage of CPU, memory, disk and network usage are reviewed regularly to identify unexpected trends.

The Service is monitored using a combination of industry standard tools and bespoke monitoring software under the control of the Hosting Support Team. These are not connected to the Hosting Centre's network other than by the Internet.

An alerting process operates 24 x 7 x 365 notifying key personnel within the Hosting Support Team of any operational server status changes.

If the 'Client Side' Service is unavailable to the Client, it is the responsibility of the Application Administrator to notify Symology of the Unplanned Outage by means of a telephone call to the Hosting Support Team. At the time of logging the call, if requested, the Application Administrator will be provided with a unique Customer Service Request Number; this will identify the support request and will be used to reference the specific incidence of unavailability. The period of service unavailability will be taken to start at the time the support call is recorded on Symology's Customer Service system.

If the cause of the service unavailability is with the Symology managed software, hardware or communications, the Hosting Support Team will organise the rectification of the problem and ensure the Client's Application Administrator is kept informed of the call progress. Once the Service is available the support request will be closed. The period of service unavailability will stop being measured at the time the support request is closed. The call will be closed with a status indicating that the service unavailability incurred was the responsibility of Symology.

If the cause of the service unavailability is outside of Symology's control, Symology will notify the Client that the Service is operating correctly. The support call will then be closed and no service unavailability will be logged. The call will be closed with a status indicating that the service unavailability was not the responsibility of Symology.

Service/System Administration

In the normal course of events, **Planned Maintenance** tasks will be performed outside the defined core working hours, normally during the Maintenance Window. Planned Maintenance includes, but is not limited to, the following tasks:

- routine deletion of temporary files, disk defragmentation, etc

SECTION 16 – SERVICE MANAGEMENT

- backup of data
- activities to accommodate new data or applications
- archiving
- updates to anti-virus services
- application of security patches
- updates to firewall and security procedures
- any other work determined by the Hosting Support Team to be essential in the continued provision of the service.

In some circumstances, such as upgrades to provide additional security, the upgrade must be applied immediately for security reasons.

It is Symology's policy that upgrades should be applied to the Service, at Symology's discretion, where they will result in a benefit to the effectiveness and quality of service provided. This will include, but is not limited to:

- the hardware and physical infrastructure of the system
- the operating system and system software
- security patches and fixes

The Hosting Support Team will endeavour to undertake such upgrades outside Core Service Hours. Where this is not possible the Hosting Support Team will endeavour to provide the Client suitable notice but in such circumstances no notice period can be defined.

It is Symology's policy that **Software Patches and Service Releases** necessary to maintain service availability or address critical fixes should be applied to the Service at Symology's discretion.

Other Software Patches and Service Releases will be applied in agreement with the Application Administrator (such agreement will not be unreasonably withheld).

Prior to the implementation of a new version or the introduction of significant functional change, users will be notified of the planned upgrade dates for the Test and Live systems. The Test System update allows users an opportunity to review the functionality prior to utilising it in Live. The Live System implementation plan proceeds as scheduled unless the Client is notified otherwise.

For **Data Migration/Conversion**, where a service is being moved from a local environment into a Managed Environment, or is being converted from another supplier, a Test system will be provided. It is the responsibility of the customer to work with their Account Manager to ensure that the Test System is configured in the exact manner that they require their live system.

Unless Symology are notified to the contrary it will be assumed that the Test System implementation has been correctly configured. Again, unless notified to the contrary, it will be assumed that the Test System configuration is acceptable for Live implementation.

SECTION 17 – SERVICE CONSTRAINTS

Service Constraints

Data Migration of historical records is not provided within the standard costs. Prices can however be supplied following further analysis of the requirement.

Access to following areas of the Street Works System will only be available to the Hosting Support Team:

- System Options including the Licensing and File Location Configuration Parameters
- Database Codes, Service Codes and Street Gazetteer Codes
- Database Structure and Physical Disk Organisation Parameters
- Inbound and Outbound Interface Transfer directories
- Mapping Definition and Layer Symbolology
- Archiving Facilities.

SECTION 19 – SERVICE CREDITS

Service Levels

The Service will be available for at least the target service level of Core Service Hours in each period as specified in the Service Card.

Although not within the scope of the Service Agreement, the Service will in the normal course of events remain available outside of Core Service Hours, except during the Maintenance Window defined.

The calculation of Service Availability will not include the following:

- Any System Administration activities which by agreement with the customer are undertaken within Core Service Hours
- Client caused outages - these may be actions due to the Client's action on the Service that is not part of the normal use of the Service or over-utilisation of the Service
- Any unavailability relating to or caused by a material breach by the Client of the terms of the Agreement
- Any unavailability as a result of the Client's inability to connect which is outside of Symology's control
- Any events beyond the reasonable control of Symology, such as force majeure events

The Hosting Support Team will notify the Client of any Planned Outages to the service, outside of the Maintenance Window. For planned maintenance an advance notification will be given within the period defined in the Service Card. For planned maintenance activities the work will be scheduled outside of the defined core hours.

In the event of an Unplanned Outage occurring that requires remedial action the Hosting Support Team will endeavour to provide the Client with suitable notice but in such circumstances no notice period can be defined.

SECTION 19 – SERVICE CREDITS

This Service Card details the default parameters which apply to the service.

SERVICE CARD

Service Parameters:

Core Service Hours:	08:00 to 18:00
Service Week:	Monday to Friday
Public/Bank Holidays:	Excluded
Service Period:	3 months
User Inactivity Suspension	30 Days
Outage Notification Period:	2 Weeks
Maintenance Window:	4 hours every other Thursday after 18:00
Application Timeout:	20 Minutes
Password Timeout:	30 days
Background Map Data Updates:	Quarterly
Archiving Processes:	Upon Customer Request
Retention of Backup data:	3 months
Allocated Total Storage Capacity:	150 GB
Service Environments:	Live, Test

Service Availability

Target Service Level:	99% of Core Service Hours
	If the Service Availability falls below the Target Service Level in any service period, the Client shall be entitled to be granted a Service Credit against the Fees for that service period, at the appropriate level as indicated in the table below and in accordance with Section 5 of the Service Description.

Service Level	Failure Credit
98%	5%
97%	10%
96%	15%
<= 95%	20%

SECTION 19 – SERVICE CREDITS

Service Credits

Service Credits will be granted in accordance with the terms of the Managed Service Agreement.

The Service Credit will be calculated in accordance with the relevant Service Card band and based on the pro-rata Charge for the Service Period.

Service Credits are not additive, that is, only one credit can be applied in any given service period.

Target service availability within Core Service Hours is defined within the Service Card. This will be monitored on the agreed Service Period defined within the Service Card. The following formula shall be used to calculate the percentage availability each period:

$$(\text{Time logged as available} / \text{Core Service Time}) * 100\%$$

For the avoidance of confusion, the "time logged as available" will be calculated as the total length of Core Service Time minus the total time Symology were responsible for Service unavailability within the period.

The total service unavailability will be calculated as the total difference between each 'Service Unavailable' request being logged and being closed in Symology Customer Service system, where the service unavailability was the responsibility of Symology.

SECTION 20 – SERVICE SUPPORT

Service Support

The Client shall not use the facilities offered by the Service to make requests for information and/or assistance, which would reasonably be considered as training.

Support is provided for the maintenance and availability of the Service hosted by Symology. This will include regular maintenance of the related infrastructure including backups and operating system patching.

If a fault is diagnosed with an item of software or hardware that is covered by a third party maintenance agreement it will be escalated in accordance with that agreement in a timely manner.

Support does not extend to primary support where the Service is unavailable to a particular Client or user because of their local network problems. In such circumstances, the criteria for determining that the problem is local to the Client will be that the Service is available to at least one remote site over an Internet connection.

The Application Administrator will be responsible for logging support calls and incidents, assisting in preparing for new software releases, organising training courses, and representing the Client at the Symology Annual Conference. They are also responsible for requesting new users, changes to existing users and requesting changes to functions or configuration. Further details regarding the Application Administrator's responsibilities are detailed in the Service Management section.

Application Management and Administration

Licensing	The Hosting Support Team will assume full control for all the licensing issues related to the operation of the Application. The Application Administrator will have the authority to specify the association of the licensed functions with a User Account. The actual implementation of the association will be performed by the Hosting Support Team.
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SECTION 20 – SERVICE SUPPORT

Application Monitoring	It is the Client's responsibility that any problems with the service or the application are reported to the Hosting Support Team when they occur in a timely manner. The Hosting Support Team will manage any necessary investigations. Failure to report problems in a timely manner, with an appropriate amount of detail may result in more serious problems occurring which require actions to be performed outside the scope of the service provision.
Monitoring "System" Logs	The Hosting Support Team will check system logs on a regular basis where available. The Hosting Support Team will manage any necessary investigations.
Monitoring Scheduled Processes	The Hosting Support Team will monitor all scheduled/batch processes to ensure that they are running successfully in accordance with the agreed schedule. The Hosting Support Team will manage any necessary investigations.
Monitoring "Functional" Logs	It is the Application Administrator's responsibility to monitor that the results of scheduled processes match the expected business requirements. Where the process does not meet the business requirements it will be the Application Administrator's responsibility to investigate the cause of failure. If they are unable to rectify the issue the Application Administrator must contact the Hosting Support Team.
Monitoring External Interfaces	It is the Application Administrator's responsibility to ensure that the results of any interfaces with external systems, match the expected business requirements in the external systems. Where the process does not meet the business requirements it will be the Application Administrator's responsibility to investigate the cause of failure. If they are unable to rectify the issue the Application Administrator must contact the Hosting Support Team.

SECTION 20 – SERVICE SUPPORT

Resolving Web Service/Interface Connection Issues	It is the Application Administrator's responsibility to monitor any non-transient connection issues with Web Service/Interface recipients. Failures should be reported to the Hosting Support Team. It is the Application Administrator's responsibility for ensuring any transactions which need to be resubmitted are done so. At the request of the Application Administrator, the Hosting Support Team will, where practical, take actions to resubmit en masse all transactions which are identifiable as unsent. In the event of continuous external failures, Symology reserve the right to refuse to resubmit, or to charge for any resubmission activities.
Resolving OD Batch File Changes (EToN only)	All changes to OD Batch details should be submitted via Web Services and therefore require no intervention from the Application Administrator or Hosting Support Team. It is the Application Administrator's responsibility to notify the Hosted Support Team of any OD Batch files which need to be loaded manually for any reason. At the request of the Application Administrator, the Hosting Support Team will load the supplied batch file into the Service. In the event of continuous changes, Symology reserve the right to charge for any resubmission activities.
Definition of Permission Profiles	Permission Profiles are records that define a set of Authority permissions. Each user must be associated with a Permission Profile. It is the responsibility of the Application Administrator in conjunction with the Hosting Support Team or Account Manager to determine the correct Permission Profile definitions.

SECTION 20 – SERVICE SUPPORT

Application Administration Permission Profile	An Application Administrator Permission Profile for accessing the solution will be provided as part of the set-up process. This Permission Profile will have access to all the facilities provided, along with the authority to change certain configuration and system option settings. Key user accounts can then be associated with the Application Administrator Permission Profile allowing them to inherit these permissions. It is the Application Administrator's responsibility to ensure that the configuration options are set correctly for their business requirements. Only an Application Administrator has the ability to request "System" changes to the configuration.
Definition of Users	An Application Administrator will have the capability of requesting new Users. It is the responsibility of the Hosting Support Team to set up the users and the appropriate access permissions. Where agreed, the Application Administrator can administer the creation of new Users. New users can only be requested by email from the Application Administrator, or in their absence by email from a deputy registered previously with Symology, via email. The email must be sent from the Client's email system and not a private system. Symology reserve the right to refuse a request to create an account if it is believed that the integrity of the system could be compromised.
Password Definition	The definition of a user's password is administered solely by the user, who will create their own password upon receipt of their login credentials. The password creation is coupled with Multi-Factor Authentication (MFA). Password safety and security remain the responsibility of each user.

SECTION 20 – SERVICE SUPPORT

Password Resets	Password resets are performed by a user selecting the “Forgot your password?” option on the login screen to reset their password. Symology reserve the right to refuse a request to reset an account if it is believed that the integrity of the system could be compromised.
Batch Process Requirements	The business requirements for any batch processes will be agreed between the Application Administrator and the Account Manager. Once finalised they will be passed to the Hosting Support Team for implementation. If the requirements for batch/schedule processes are such that they would place unreasonable or excessive load on the managed service, then Symology reserve the right to make an additional charge for provision of this service. This charge will not be levied if the requirements would be considered reasonable for standard operation of the service.
Definition and Scheduling Batch Processes	The Hosting Support Team will ensure that the batch/schedule processes are defined and scheduled as per the business requirement. In general, batch/schedule processes will be scheduled outside of core hours, unless by their nature it is considered reasonable and practical to schedule them within core hours. The right to charge is reserved in the event of continuous changes to requirements.

SECTION 20 – SERVICE SUPPORT

Archiving	The number of archive runs included within the Service is defined on the Service Card. Archiving policy will need to be agreed between the Application Administrator and the Account Manager. The agreement will be documented on the Service Plan. Once agreement has been reached, the Hosting Support Team will archive data in accordance with the policy. Each archive run will require exclusive use of the application, and this will not be included within service availability calculations.
Test Systems	The Hosting Support Team will provide a test system. If updates are required, then Symology reserve the right to charge for these updates. In addition, the Hosting Support Team must be informed 30 days in advance of the required date. In general, the Test System will not be exactly the same integration capabilities of the Live System. For example, it will not have the ability to send and receive Street Works transactions. This is to safeguard the end users from entering data that could then be erroneously sent to a live 3rd party system.

SECTION 20 – SERVICE SUPPORT

Advanced Reports	The Bespoke Reports Package Licence is necessary for users who require access to advanced Report facilities. If this facility has been licensed then the Bespoke Reports Licence will be made available in the appropriate system. Unless users are sufficiently proficient, it is recommended that templates be refined and tested in the test system prior to being implemented in the Live system. Please note, any corrective actions as a result of user error, performed by the Hosting Support Team may be chargeable. The Application Administrator will be responsible for determining the users who have access to the Advanced Reports function. If users have not licensed the Bespoke Reports Licence they will still have access to the standard Report facilities.
Report Viewer	This is a standard facility provided to all customers, in both the Live and Test systems, to view pre-determined templates. Where customers have not licensed the Advanced Reports facility, these will be the standard Software Templates.
Standard Reporting	It is possible to provide Reports of a statistical nature, reporting on tables within the underlying business database. Any standard reports of a mandatory nature relating to National Indicators etc. will be provided in accordance with the prescribed timetables.

SECTION 20 – SERVICE SUPPORT

Bespoke Reporting	Any requirements for bespoke reports based on database tables are outside the scope of the basic Service and requirements will need to be discussed with the Account Manager. In general, due to the complexity of the database, the need for on-going maintenance as a result of database changes and the potentially detrimental effects on the Service of a poorly designed query, the two realistic options for the Client is to engage Symology's services to design, maintain and manage the reports, or to utilise the data warehouse function. If the Client pursues the option of designing their own reports and queries, then Symology reserve the right to make a charge for any additional load placed on the Service, and/or to remove the reports if it is considered that they will have a wide-ranging detrimental effect to the performance of the Service.
Embedded Mapping	The Hosting Support Team will control the installation of the embedded mapping software. As part of the initial configuration process the Hosting Support Team will define and create the map document(s) and map layer structures including the appropriate Symology and access permissions.
Creation of Standard Map Layers	The Hosting Support Team will control the creation and installation of the Map Layers typically required for System implementation.
Import/Export of Map Layers	Where the requirement exists to import/export (on a regular basis) Map Layer information from/to the solution to/from a 3rd party this must be agreed between the Application Administrator and the Account Manager. Symology reserve the right to charge where significant work is required, or the work needs to be provided "out of hours".

SECTION 20 – SERVICE SUPPORT

File Retrieval	On completion of a process, any export, transaction or report files will generally automatically be made available via the solution. From this location they can be downloaded locally. For any file not automatically available, the Hosting Support Team should be contacted to perform the transfer.
Interface File Upload	It will be the responsibility of the Application Administrator to upload 3rd party data files required for processing within the System, where applicable.
Gazetteer Import	All Gazetteer Import Facilities are controlled by the Hosting Support Team.
Mobile Device Solution	The Hosting Support Team will implement all the technical server-side components to enable use of the Mobile solution in line with any Software Upgrades performed.
Mobile Device Software	The Hosting Support Team will ensure that the latest version of the Mobile Device software is permanently available. Customers are expected to update all their mobile devices such that they are running the version of the software provided.

SECTION 20 – SERVICE SUPPORT

Mobile Device Installation	It is the Client's responsibility to install the Mobile solution on all their mobile devices. To enable successful installation of the Mobile solution on the mobile devices, it is the responsibility of the Client to provide: • access to the internet for attached mobile devices • no firewall restrictions that would prevent or limit access to the Symology solution • no restrictions that would prevent the downloading of Symology mobile software • no restrictions that would prevent the running and installation of Symology mobile update software • update access so that the update programs work successfully It is the Application Administrator's responsibility for implementing and maintaining the Mobile Device Access Profiles within the solution, where applicable.
Mobile Device Usage Policy	Provision of the Mobile device solution is dependent on the acceptance of a fair use policy. It is expected that Customers will use the solution in an efficient, reasonable manner. Symology reserve the right to charge where use is outside of the fair use arrangements.
Warranty Responsibility	The warranty and maintenance of all devices are the responsibility of the customer.
Street Works Charging Regime Maintenance	It is Symology's responsibility to maintain/manage the Street Works Charges. It is the Application Administrator's responsibility to review the Street Works Charges.
Street Works Message Settings	It is the Application Administrator's responsibility to maintain/manage/review the Street Works Message Settings in accordance with national standards and any local requirements.

SECTION 20 – SERVICE SUPPORT

Working Days Calendar Definition	It is the Hosting Support Team's responsibility to maintain the Working Days Calendar in line with requirements where applicable.
Portal Downloads	It is the responsibility of the customer to ensure that all important documents are downloaded from the solution.

SECTION 20 – SERVICE SUPPORT

Corrective Actions

Correction of System Errors	Following identification of system errors (For example an Operating System or 3rd Party Software Error etc) the Hosting Support Team will assume full responsibility for the correction of the error. If there is a major operational problem the Hosting Support Team will attempt to get the system operational within the time constraints determined by the Service Level Agreements. If it is a problem, which does not affect key operations, the Hosting Support Team will organise in conjunction with the Application Administrator, the corrective action and the time it is to be performed. The Hosting Support Team will perform all correction operations. At all stages the Hosting Support Team will keep the Application Administrator informed.
Correction of Data Errors	After the identification of a data error (for example a Data Corruption or inconsistency) the Hosting Support Team will assume full responsibility for the correction of the error. Dependent on the type of data error the Hosting Support Team will schedule corrective action. Whenever possible, these will be undertaken outside of the Core Service Hours.

SECTION 20 – SERVICE SUPPORT

Technical Administration

Operating System	The Hosting Support Team will take full control of the operating system.
Operating System Upgrades	The Hosting Support Team will take full control for updating the operating system. The Hosting Support Team will ensure all 3rd party software is compatible with the new operating system version.
Operating System Patches	The Hosting Support Team will take full control for applying operating system patches.
Virus Checking	The Hosting Support Team will take full control for installing and monitoring the virus checking software. In the case of a serious security risk the application server may be taken off-line and appropriate measures taken. This action will only be taken in agreement with the Application Administrator.
FTP & Web Services	FTP & Web Services (where applicable) will be managed by the Hosting Support Team on a separate server, which is configured to operate with the System.
Disk Management	The Hosting Support Team takes responsibility for Hard Disk Management, where applicable.
Processor Usage	The Hosting Support Team will monitor the server performance during the course of the working day and will advise the Application Administrator of any processes that are causing system performance to deteriorate.
Hardware Maintenance	The Hosting Support Team will assume responsibility for all hardware maintenance issues, where applicable.
Interface Technical Implementation	Any configuration or installation required to facilitate an interface into the system will be performed by the Hosted Support Team.

SECTION 20 – SERVICE SUPPORT

Interface Monitoring	The Hosted Support Team will monitor the process or service to ensure that it is running at the appointed time and also provide a cursory check to ensure that reasonable results are being produced.
Functional Interface Monitoring	It is the Application Administrator's responsibility to ensure that the interface is working as expected in terms of the rules governing the processing of transactions and the exact results that are being produced. The Application Administrator is also responsible for the identification and correction of functional errors / warning messages produced by the interface process.

Disaster Recovery

Backups	Hourly, a geo-replicated backup is taken and located on a different region, retained for 35 days. By replicating the data Symology can ensure that it will have secure backups offering an RPO of 1 hour and an RTO of a maximum of 12 hours. (Enhanced SLA available offering an RPO of 5 minutes and RTO of 1 hour.)
Backup Validation	The Hosting Support Team will perform the validation of the backup procedure.
Virus Checking Software	The virus checking software will be as per our recommendation. The Hosting Support Team will ensure that the virus software is kept up to date.
Networking	Connection to the solution is the responsibility of the Client. The Hosting Support Team may be able to offer advice on resolving any connection issues.

Customer Service/Support Operations

The goal of Symology's Customer Support Service is to ensure that all customers receive the assistance they require for the successful use of Symology's software products and services.

As part of the company's on-going commitment to quality and best practice, Symology has adopted the internationally recognised ITIL approach to Service Management. ITIL provides a cohesive set of best practices, which have been drawn from the public and private sectors internationally.

This section defines all relevant information regarding the standard support service provided by Symology as from the revision date detailed in the document footer.

The performance of our Customer Service is continually reviewed in response to feedback from our customers. If there are any areas of this service, which you feel could be improved, please contact Jon Panconi our Customer Services Manager via 01582 812444 or jon.panconi@symology.co.uk with details of your suggestions.

Symology's support systems and processes are monitored on an ongoing basis against ITIL best practice guidelines.

Terminology

In line with ITIL standards, customers should be aware of the following terminology and definitions:

Previous to the introduction of ITIL standards Symology staff used the term "Requests" to refer to all issues raised with the Customer Service team. Under ITIL the term "**Case**" will be used instead.

Each "**Case**" will be either an "**Incident**" or a "**Service Request**".

An "**Incident**" is something which may cause an interruption to your service.

A "**Service Request**" is a request for information, advice or a change e.g. a request for a password to be reset on the solution or an Enhancement Request.

Commitment to Customers

Customer Satisfaction

Customer satisfaction is of the uppermost importance to Symology. This should be reflected in the level of service you receive and in the way that you receive it.

In addition to feedback you give Symology via your Account Manager, the Symology Annual Conference and other direct communications, we proactively measure customer satisfaction in the following ways:

Customer Surveys

Customers will receive support survey emails on a regular basis depending on how many cases they raise. This provides the customer with the opportunity to rate how satisfied they are with the service.

Account Management Meetings

In addition to the regular email surveys relating to the Support service each customer organisation will be visited by their allocated Account Manager (at the very least once per year) to review their overall satisfaction with the products and services that they receive from Symology.

The results from each of these processes will be used to drive further improvements to our service. Any formal complaints will be recorded and acted upon, and the customer will be contacted by telephone by a senior member of staff to acknowledge and discuss the issue arising.

Customer Service

The Customer Services team will endeavour to provide the best possible service to all customers at all times. Our aim is to provide a service that ensures that expectations are met or exceeded and delivered in a manner that customers appreciate.

The Customer Services team will be proactive in updating users, chasing users for responses and retaining ownership of reported issues when immediate responsibility rests with another person or department within the company.

Customers should expect that all Symology staff are responsive, attentive and courteous at all times. Should you ever feel that this expectation is not being met please contact the Customer Services Manager.

Customer Communication

Communication with the Customer Services team is likely to be through a mixture of telephone, email and the on-line customer service reporting portal.

Email from Support Analysts will usually come via the Support system and have an address of support@symology.co.uk with specific Case Reference tags in the subject line. It is important that responses to these emails are replies to the original email and preserve the Case Reference tags in the subject line.

Where appropriate we use shared remote access sessions between Support and user desktops to investigate Cases and demonstrate solutions.

Customer Service Level Targets

Our Service Level targets are defined in Appendix A of this section.

Our Expectation of the Customer

Email

Customers' support contacts must each have their own email address, unique to them as an individual.

This allows our Service Desk system to automatically identify the individual logging the support request, and allows us to contact the individual directly by other means (including phone) if need be. It also allows our system to update the individual directly when the status of the support request changes.

These email addresses should also be specific to the supported customer organisation. For example, if a more than one customer organisation outsources their ICT operations to a contractor, and that contractor's staff may require support from Symology, those members of staff must have access to different email addresses for each customer.

This allows any support request raised by email to be automatically associated with the correct customer organisation.

If these requirements cannot be met, delays may be incurred and the Service Level targets defined in Appendix A will not be applicable.

Training

Customers requiring support are expected to have had relevant training in Symology's products.

The Customer Service Desk should not be viewed as an alternative to attending training courses or taking on-site consultancy services. In particular, it should not be expected that step-by-step assistance will be provided over the telephone for issues that are covered by training courses which the customer has not attended.

On-line Help/Manuals

It is expected that all customers are familiar with, and have access to the on-line help system/knowledgebase and all relevant training course documentation provided. This may facilitate some incidents being resolved prior to an issue being raised with Support or outside of standard support times.

Super User/Primary Support Contact

It is absolutely essential that each organisation appoints a primary support contact or "super user" (or one per business area in the case of larger organisations). This person

will be a more experienced user and responsible for raising issues with Support, filtering out any common local issues first.

Software Upgrades

When a new version of the software is issued, it is expected that the test system will be used to allow the customer to identify the impact of the new software on their own local processes, locally defined reports and interfaces, etc, as well as an opportunity to familiarise users with changes. It also gives the customer the ability to test new updates and to test recommended solutions and bug fixes safely without any impact or risk to the live system.

Self-Service and Local Problem Solving

In many circumstances customers can resolve issues quickly using our self-service facilities and/or by conducting initial diagnostic actions locally.

Self-Service

When logging a new case via the Customer Service Portal, the support system will automatically check the details recorded against its knowledgebase and, where it is a known issue, will provide details of a previously recorded resolution to the problem.

The user can also search the knowledgebase for tips and advice.

How to Raise a Case

Symology's Customer Service Team can be contacted by any of the following means:

- Telephone: 01582 812444
- E-mail – support@symology.co.uk
- Customer Service Portal - <http://support.symology.co.uk>

Regardless of the method used to raise the case, the user will be contacted via telephone or email by the Support Analyst assigned to the case. Standard service hours (unless otherwise agreed) run Monday to Friday (excluding English national holidays) between 08:00 and 18:00.

Telephone

The information will be recorded in the Support system following operational procedures. Customers will be advised of the Case number and will receive an email confirming this.

Email

Emails can be sent at any time, however customers should be aware that any Case reported by email outside of agreed service hours may not be investigated until the next working day.

The information will be recorded in the Support system following operational procedures. Customers will be advised of the Case number and will receive an email confirming this.

Customer Service Portal

The Symology Customer Service Portal provides a web interface that allows customers to:

- Search and browse the Knowledgebase
- Log new Cases, specifying a Priority
- Check on the status of existing Cases (including those opened by phone or email)
- Add comments and attachments to existing Cases

A detailed Customer Service Portal User Guide is available to users on logging in to the portal.

Every contracted customer will be provided with login credentials for one individual to access the Customer Service Portal. These login credentials are specific to the

SECTION 21 – CUSTOMER SERVICE\SUPPORT OPERATIONS

individual and must not be shared with other individuals. At Symology's discretion, login credentials for further individuals may be supplied.

The Support Process

Case Creation & Classification

All cases are recorded on Symology's internal Service Desk Management system. This handles all Cases – both Incidents and Service Requests.

Regardless of the method used by the customer to communicate the request, the user will always receive email confirmation of the Case number during the Case creation process.

If a customer has given an indication of their perception of the priority of the Case (see Appendix A) this will be noted on the Case. Failing this, the Support Analyst will use their best judgement as to the most appropriate priority. If no priority can be easily determined, the priority will be initially set to 4 (Queries/Advice) – see Appendix A.

If the Support Analyst believes the Case priority has been set incorrectly by the customer they will contact the customer to discuss and agree the priority as appropriate.

Case classification includes checking all the Case details and assigning ownership of the Case to a Support Analyst.

There are circumstances under which support may not be available. For details of these, please refer to the Product Support policy in Appendix B at the end of this section. This will always be discussed with the user.

Case Assessment & Knowledge Base Searching

The assigned Support Analyst will initially assess the Case details. They will next look at other Cases open for that user to check for any correlation and, if so, to talk to the Support Analysts involved.

The Support Analyst will next search the Knowledge Base for previously recorded Cases of a similar type, and the recommended solutions.

For high priority Cases the user will be contacted before/during this process.

Case Investigation & Progression

Any relevant information gained from the Knowledge Base will direct the investigation, which will be carried out in conjunction with the user.

The Support Analyst will initially respond to and then update the user at regular intervals.

Where necessary, Support staff may request additional information from users to that supplied when the Case was created.

Every effort is made to reduce the level of user time required in Case progression. However, in some complex situations the amount of user time required may be relatively high. Discussion between the Support Analyst and the user should take place to ensure that the user is involved at times that result in the least possible disruption to their business.

Where required, Support staff will contact third line support resources and third party organisations to aid with the investigation.

Case Updates

Users will be updated at regular intervals. For details of the relevant Service Levels see Appendix A.

All user responses will be entered in the Case details. When an email is sent to a user the Case number will be included in the subject line of the email.

All communication from users to Support must be accompanied by the relevant Case number unless it is a new Case being created.

Users can use the self-service features described earlier to check on progress or to update Cases on-line. In addition, of course, users can ring or email the Support Analyst investigating the Case. Where updating the Support Analyst by email users should respond by replying directly to an email from the Support Analyst. This should have an address of support@symology.co.uk and will contain specific Case Reference tags in the subject line that ensure that the details in the reply are automatically entered into the Support system.

Where Support is waiting for information from a user for high or very high priority Cases, the analyst will remind the user that a response is being waited for. However, it remains the responsibility of the user to remember to respond and to monitor the status of their Cases.

Case Resolution

For Incidents, the aim of the investigation will ultimately be to resolve the customers experienced service failure as quickly and effectively as possible. When the Incident relates to an underlying problem in the program code, a workaround will usually be quicker to produce than a program change — as a result, the primary aim will be to find a workaround that is acceptable to the customer. If an acceptable workaround can be found, the Case Status will be set as “Solution Proposed” (see Appendix C) and the underlying problem escalated within Symology. If an acceptable workaround cannot be

found, the Case Status will remain as “In Progress (S)” while the underlying problem is escalated within Symology.

For Service Requests relating to requested enhancements, these will be managed and tracked by the customer’s assigned Account Manager.

Case Implementation & Testing

Once a solution has been identified, it will need to be implemented. The resolution will ideally need to be implemented and tested in the Test system prior to deployment on the Live system. This avoids further problems, e.g. data integrity corruption, which could be caused by a faulty resolution.

The implemented resolution must then be tested by the user and the results reported back to the Support Analyst. It is important that the Support Analyst is informed even if the resolution is satisfactory, so that the case can be closed.

Further investigation will occur should the implemented resolution fail to resolve the original problem.

Case Closure

A Case will normally be closed on the user’s instruction once they have confirmed that service has been restored or the service request completed. However, where a Case is awaiting a response from customer for more than 14 days the user will receive an email reminder that the Case will be closed automatically after a further 7 days if no response is received. Automatic Case closure will be confirmed by email.

It is important that users either inform Support when a supplied resolution has resolved the Case, or close the Case themselves through the Customer Service Portal.

Previously closed Cases cannot be re-opened.

Where a previously closed Case was closed in error, either by the user or by the Support Analyst, a cloned Case will be created and the user advised of the new case number.

Case Monitoring

Users can monitor the progress and status of their Cases via the Customer Service Portal or by calling the Customer Service team.

Case Escalation

Cases will be escalated on user request where agreed with the Customer Services Manager.

The case should initially be escalated to the Support Analyst managing the case. If the case still fails to be handled in a manner consistent with the standards detailed in this document then the case should be escalated to the Customer Services Manager. Finally, if the user is still not happy with the progress or management of the case, the case should be escalated to the user's Account Manager and Support informed.

Cases that are escalated will not necessarily have the priority of the Case changed.

Service Level Management

The service level targets defined in Appendix A of this document will be monitored and measured, and every effort made to meet them.

Where a user believes that response or update targets are being regularly missed, or the correct process does not appear to be being followed, the Customer Services Manager should be informed via jon.panconi@symology.co.uk.

Software Change Management

Where a case has been identified as an application fault, or documentation that requires resolution, it is passed to the Development team. Where possible an estimated date for resolution will be supplied to the user via Support.

Where a software or documentation change is appropriate then this will be included in the next full release or patch release depending on urgency and priority. Users will be informed when new releases are available, where applicable.

User Complaints

Where users feel that all other means to address poor service have been exhausted and wish to complain formally then a letter or email should be addressed to the Customer Services Manager via jon.panconi@symology.co.uk. All complaints are investigated with the involvement of the user.

Appendix A – Service Levels

The Service Levels in this appendix will apply unless other contract-specific service levels have been agreed.

All service level times stated are targets and are not guaranteed. The quoted times are based on the availability of full direct access to the user's systems via an appropriate remote access tool or direct dial-in facilities.

Case Prioritisation

One of four business impact priority values will be assigned to a case, as described below.

Priority	Name	Description
1	Critical Impact	Whole system or major functional area inoperable.
2	Significant Impact	Problem significantly affecting operation. System usable but severely limited.
3	Moderate Impact	Minor problems. System largely usable.
4	Queries/Advice	Non-Urgent. Queries and Advice.

For Cases raised via the Customer Service Portal, support will use the priority specified by the user. For Cases raised by email, if no priority can easily be determined from the text of the email, the priority will be set to 4 (Queries/Advice).

Response and Resolution Targets

Priority	Response Target	Resolution Target
1	1 Hour	24 Hours.
2	1 Hour	3 Days.
3	24 Hours	Investigated within 5 days, although the software may not be upgraded until the next software release.
4	24 Hours	n/a.

All timings are based on the agreed Service Hours (see section 18). The “clock” is effectively stopped when waiting on response from the customer.

SECTION 21 – CUSTOMER SERVICE\SUPPORT OPERATIONS

It is expected that the customer has applied all software updates that have been issued. Where the Customer Support Team identifies that a new version of software is required, either because the problem has been resolved recently, or a new software release has been created to resolve the reported problem, the customer is expected to apply the update forthwith.

The support service is limited to products which are defined in the customer's Licence Agreement and matters directly associated with the operation of those products within the environment specified.

Symology reserve the right to raise charges for any significant time spent on other matters such as the setup, configuration or problem investigation of operating systems, networks and communications on non-Symology supplied components.

The support service is designed to operate with a customer contact who is fully trained in the use of the Symology products. It does not provide an alternative to appropriate training and consultancy services.

Where the Symology products provide user-specification facilities (e.g. template definition, report generation, dictionary definition) the support service does not include using the tailoring facilities to provide the required output for the customer. Although guidance will be provided in response to specific queries, any requirement to "build" the required system for the user will be chargeable.

Advice and guidance will always be provided for recovery from operational problems. Where the difficulties are caused other than by the Symology products (e.g. operating system or hardware failures) or as a result of the customer not following recommended procedures for security and recovery, Symology reserve the right to charge for any extensive time spent on problem resolution.

Where a service call results in a recommended action from the support staff, customers are requested to always inform the support team of the results of carrying out the recommendations.

Even in the event of a successful outcome, this is important in order to clear the case in our system.

Appendix B - Support Policies

User Status

It is our policy to withhold support from users who have been put “On Hold” by our Finance and Administration department. This most typically occurs as the result of invoices being outstanding beyond the terms of the contract.

Supported Versions

It is our policy to provide support for all versions of our solutions. However, for releases older than the penultimate available version the support provided may be limited.

Product upgrades and patches will generally only be made available for the latest version of any product except in the case of high impact cases. User specific exceptions may be made at the discretion of the Customer Service Manager or by mutual agreement with Symology.

Version Compatibility

With every major release of the software, where required, Symology issue a “Product Compatibility” document at the same time the Advance Release Notice is distributed to customers.

The Product Compatibility document describes what versions of software are supported with different operating systems and versions of third-party components. Support can only be provided where compatible products for the version in question are being used.

Unauthorised User Modifications

Where the system database or applications have been modified by the user without agreement or instruction from Symology e.g. editing the underlying database directly, it is our policy that support will be withheld.

If a case is reported to Support, and investigation of the case shows that it has occurred as a direct or indirect result of user modifications not sanctioned by Symology, then Symology will make a charge relating to the amount of time spent by Symology investigating the case. Charges will be based on standard office-based consultancy rates.

Training/Documentation/Help

It is our policy to check that the user experiencing the problem has received appropriate training. Support will not be given to users who have not received training except at the discretion of the Customer Services Manager. Support will be given if training is scheduled and already paid for.

It is not intended that Support be used as an alternative to reading supplied documentation such as Installation Guides, Release Notes, Knowledge Base or On-line Help system. However, advice and help on understanding supplied documentation will be provided.

Appendix C - Case Status Codes

Status Code	Description	Action waiting on
New	These are cases that are “Awaiting Allocation” these will be assigned to a Support Analyst by the Support Team Co-ordinator.	Symology
Allocated	The case has been allocated to a Support Analyst but is not being actively worked on.	Symology
In Progress (S)	The case is actively being investigation by (S)ymology.	Symology
In Progress (C)	The case is awaiting a response from the (C)ustomer. Cases at this stage will be automatically closed after 21 days if no response is provided by the customer, however 7 days before this a reminder e-mail will be generated.	Customer
Solution Proposed	A solution has been proposed by Symology to the Customer to resolve the case. Cases at this stage will be automatically closed after 21 days if no response is provided by the customer, however 7 days before this a reminder e-mail will be generated.	Customer
Closed	The case is closed.	None

The SLA “clock” for target response and resolution times is active only during the applicable Business Hours and only while action is waiting on Symology.

SECTION 22 – ORDERING & INVOICING PROCESS

Ordering & Invoicing Process

It is the responsibility of the party defined as the Licensee within the agreement to pay the fees associated with the Service. In situations where sub-contractors are operating on behalf of the licensee, it remains the Licensee's responsibility to pay the fees but they may choose to reclaim the costs from the sub-contractors where appropriate.

For all services, a valid Purchase Order which covers all necessary Fees is required before the commencement of the service.

Symology will invoice on receipt of the Purchase Order. Invoice terms are strictly 30 days from receipt of invoice.

Invoices remaining unpaid after 30 days may result in termination of service in accordance with the terms and conditions ("Managed_Service_Agreement.pdf").

SECTION 23 – TERMINATION

Termination

Termination is in accordance with the provisions stated in the enclosed Managed Services Agreement document - “Managed_Service_Agreement.pdf”.

Data Restoration / Service Migration

See “Off-boarding Process” in Section 14 of this document.

Customer Responsibilities

The customer must ensure that only those users authorised to access the service attempt to use it. While it is the Hosting Support Team's responsibility to ensure that suitable access restrictions are in place, the customer must ensure that information (e.g. URL's, IP addresses, user names and passwords etc.) are not distributed to individuals outside of their user community.

See Roles & Responsibilities section within Service Management for further details.