

APPENDIX XXX –
SELF-SERVICE INTERFACE DESIGN SPECIFICATION

Definitions

In this document, except where the context otherwise requires:

- expressions defined in Section A1 of the Code (Definitions) have the same meaning as is set out in that Section;
- the expressions in the left hand column below shall have the meanings given to them in the right hand column below; and
- any expressions not defined here or in Section A1 of the Code have the meaning given to them either in the DCC User Interface Specification or the Self-Service Interface Code of Connection.

Interface Transaction	means one of the interactions with the Self Service Interface as detailed in clause 1.10.
Job Type Role	means one of the functional roles as set out in the table contained in clause 1.9.2
Order Management System (OMS)	as defined in the CH Handover Support Materials
Policy Enforcement Point (PEP)	<p>a logical entity that enforces policies for admission control and policy decisions in response to a request for access. It is the logical boundary between the DCC Systems and connecting systems, namely User Systems, RDP Systems or any other systems used to access the Self-Service Interface. The PEP ensures that:</p> <ul style="list-style-type: none">(a) the policies in the applicable Code of Connection relevant to the applicable Party or RDP are being enforced;(b) there is appropriate separation of the DCC Systems from the connecting systems of the applicable Party

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or RDP; and

- (c) all the connections to the User Systems, RDP Systems, systems used to access the Self-Service Interface, or DCC Systems are compliant with the same applicable Code of Connection.

Security Assertion Markup Language (SAML) an open, published framework for exchanging security information between online business partners

1 SELF-SERVICE INTERFACE DESIGN SPECIFICATION

The DCC shall ensure that, where the DCC receives a request to access the Self-Service Interface, it shall direct that request to the appropriate URL for dealing with that request, and that such URL shall be implemented and maintained such that communications across it can be authenticated.

1.1 Authorisation

The DCC shall ensure that each user of the Self-Service Interface shall only be permitted to access an Interface Transaction if it is entitled to do so pursuant to clause 1.9.1 and 1.9.2 given the User ID(s) and Job Type Role(s) that are supplied as attributes of the SAML assertion.

1.2 SAML Authentication

The DCC shall provide to Users a SAML-capable Identity Provider Service for the purpose of authentication of User Personnel to the Self-Service Interface (the “DCC Identity Provider Service”).

Each User may use an Identity Provider Service that is not the DCC Identity Provider Service for the purpose of authentication of its User Personnel to the Self- Service Interface.

To authenticate each request from a User Personnel that seeks to access the Self-Service Interface, the DCC shall use either:

- a) a SAML assertion provided by the DCC Identity Provider Service (as defined in clause 1.3); or

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- b) a SAML assertion provided by an Identity Provider Service provided by the User (as defined in clause 1.4).

After an Identity Provider Service provides the User Personnel's SAML assertion, the DCC shall store a secure cookie in the User Personnel's browser. Such secure cookie shall be set to expire 8.5 hours after initial authentication by:

- a) the DCC, for the DCC Identity Provider Service; or
- b) the User, where such User is using an Identity Provider Service that is not the DCC Identity Provider Service.

If this cookie exists during subsequent authentication, the DCC shall bypass SAML authentication. Where using either the DCC Identity Provider Service or any other Identity Provider Service, if a User wishes to change the rights of that User Personnel to access the Self-Service Interface, the User shall delete the cookie from the User Personnel's browser cookie store.

The User shall ensure that its browser uses HTTP POST to transfer SAML between its Identity Provider Service and the Self-Service Interface.

Each User shall ensure that SAML assertions are applied when requesting access to the Self-Service Interface.

Each User must, when using any Identity Provider Service, present the Job Type Role(s) for which access to Interface Transactions are being requested in the SAML assertion sent to the DCC.

Each User shall ensure that each SAML assertion includes a Digital Signature produced by a DCKKI Digital Signing Key associated with a DCKKI Infrastructure Certificate in accordance with the FIPS 186-4 Digital Signature Standard using SHA-256 hashing algorithm. The User shall ensure that a SHA-256 hashing algorithm is applied to the SAML assertion.

1.3 SAML Authentication via the DCC Identity Provider Service

Where a User Personnel attempts to access the Self-Service Interface and a non-expired cookie is not stored in the User Personnel's browser cookie store:

1. The DCC shall send a SAML assertion request to the DCC Identity Provider Service via the User Personnel's browser;
2. When requested, the User shall provide the requested credentials (username, password, and certificate) to the DCC Identity Provider Service;
3. As set out in clause 1.1, the DCC shall grant or deny that person's access to the Self-Service Interface by providing a cookie enabling such access to be stored in the User Personnel's browser cookie store. If access is denied, the DCC shall provide a browser message which requests that the User Personnel resubmits their credentials.

The DCC shall ensure that, where a User is using the DCC Identity Provider Service, access to the Self-Service Interface is only provided once a User Personnel performs a login and generates a new password the first time that it uses that Identity Provider Service.

1.4 SAML Authentication via an Identity Provider Service that is not the DCC Identity Provider Service

When using an Identity Provider Service that is not the DCC Identity Provider Service, the User shall comply with this clause 1.4.

1.4.1 Authentication Requirements

A User providing a SAML assertion when seeking to access the Self-Service Interface via an Identity Provider Service that is not the DCC Identity Provider Service, shall ensure that its Identity Provider Service:

- prompts the User Personnel to provide their credentials (username, password, and certificate); and
- validates the User Personnel's credentials and (only where successfully validated) sends a SAML response including a SAML assertion to the Self-Service Interface.

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The User shall ensure that SAML assertions, provided to the DCC by its Identity Provider Service, comply with the OASIS Standard – Assertions and Protocols for the OASIS Security Assertion Markup Language (SAML) v2.0.

The User shall ensure that the Identity Provider Service authentication mechanism shall use an appropriate SAML security assertion to demonstrate conformance to UK Government Authentication Framework Level 2.

1.4.2 Enrolment of an Identity Provider Service that is not the DCC Identity Provider Service

Where using an Identify Provider Service that is not the DCC Identify Provider Service, prior to seeking to access the Self-Service Interface for the first time, the User shall obtain at least one DCKKI Infrastructure Certificate in accordance with the DCKKI RAPP, and shall install such DCKKI Certificates on its Identity Provider Service.

The User shall configure their Identity Provider Service as defined in clause 1.4.1 and export and send a copy of the Identity Provider Service metadata to the DCC via secured electronic means, where such metadata shall include the URL of the Identify Provider Service and contact details in respect of the Identity Provider Service. Where the DCC reasonably requires the metadata to include additional information, the DCC shall inform the User of the information required and the User shall provide the information requested.

1.4.3 SAML Profiles, Bindings and Protocols

The User shall ensure that the Identity Provider Service it uses supports the following SAML profile, binding and protocol:

Profile	Web Browser SSO (single sign-on)
Binding	HTTP POST (HTTP/1.1)
Protocol	Authentication Request Protocol

1.4.4 Identity Provider Service SAML Configuration

Where a User notifies the DCC that it wishes to use an Identity Provider Service that is not the DCC Identity Provider Service, the DCC shall upon request provide, to that User via secured electronic means, the following information to be included in each SAML assertion:

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- the service provider unique ID to be used by the Identity Provider Service, which is denoted as '[UNIQUE IDENTIFIER SP]' in the SAML attributes list below; and
- the URL formatted identifier of the Self-Service Interface, which is denoted as '[DCC SP URL]' in the SAML attributes list below.

The User shall ensure that their Identity Provider Service:

- shall not sign Authentication Requests (AuthnRequest);
- shall sign SAML Assertions;
- shall not sign Authentication responses;
- shall not encrypt any part of the SAML assertion (other than the Digital Signature);
- shall use persistent and unique nameIDs;
- shall only include NotBefore, NotOnOrAfter or AudienceRestriction in the SAML Condition elements; and
- shall set the SAML assertion nameID to be persistent and unique to the User Personnel.

The User shall ensure that their Identity Provider Service sets the following SAML attributes shown in square brackets, making reference to the information shown after each colon:

- [UNIQUE IDENTIFIER IDP]: a unique ID assigned to the SAML response by the Identity Provider Service.
- [UNIQUE IDENTIFIER SP]: the service provider unique ID for the SAML request, as provided by the DCC.
- [TIMESTAMP]: a timestamp in standard SAML format.
- [DCC SP URL]: the URL formatted identifier for the Self-Service Interface, as provided by the DCC.
- [IDP ISSUER URL]: a URL identifying the Identity Provider Service issuing the SAML assertion.
- [SAML ASSERTION UNIQUE IDENTIFIER]: a unique identifier assigned to the SAML assertion by the Identity Provider Service.
- [MESSAGE SIGNATURE]: a Digital Signature generated by the signing of the SAML assertion message using the DCCKI Digital Signing Key associated with a DCCKI Infrastructure Certificate.

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- [USERNAME]: a unique username assigned to the User Personnel by the Identity Provider Service.
- [SESSION EXPIRY]: a valid SAML date/time object describing the expiry time of the session associated with the user.
- [ASSERTION START]: a valid SAML date/time object describing the start time of the validity of the SAML assertion.
- [ASSERTION EXPIRY]: a valid SAML date/time object describing the expiry time of the validity of the SAML assertion.
- [SAML AUTHENTICATION CONTEXT]: a valid SAML Authentication Context Class describing the authentication that the user has completed with the Identity Provider Service.
- [Role name]: Job Type Role(s) as described in section 1.9. Multiple roles should be specified by separating role names using commas (,).
- [OrgID]: a list of User ID(s) where the User has been granted access to the Self-Service Interface on behalf of another User, in accordance with clause 1.9.3 and such access has not been rescinded in accordance with clause 1.9.4. Multiple User IDs should be specified by separating values with commas (,).

1.5 Interactive Web Interface

The DCC may timeout any connection to the Self-Service Interface after a period of inactivity of 15 minutes.

1.6 File Download Interface

The DCC shall ensure that the Self-Service Interface provides User Personnel who are downloading files with a prompt to save files.

1.7 Interaction with Order Management Systems (OMS)

The DCC shall provide a link from the Self-Service Interface that enables Users to navigate to the OMS. Access to the OMS and capabilities of the OMS are defined in the Communications Hub Handover Support Materials.

1.8 Error Handling

The DCC shall present, when an error is detected when a User attempts to either access the Self Service Interface or access any Interface Transaction, meaningful error messages containing codes as per HTTP/1.1 standard.

1.9 Roles

1.9.1 DCC defined access

The DCC shall provide to User Personnel of each User access to each Interface Transaction that the User is eligible to access as set out in Section H8.16 or, where not specified in Section H8.16, as set out in this clause 1.9. Such access shall either be full or conditional, where:

- 'Full' means that the User can access data and use all functions associated with the specific Interface Transaction; and
- 'Conditional' means that a User's entitlement to access data and use all functions associated with the specific Interface Transaction is based on the access rules for conditional access set out below.

The DCC shall provide full access for the following Interface Transactions for any User:

- UC_Login_001 - Log In as set out in clause 1.10.2
- UC_Inventory_001 - Smart Metering Inventory as set out in Section H8.16(a)
- UC_CSPCoverage_001 - SM WAN network coverage as set out in Section H8.16(f)
- UC_CSPOMS_001 - Access to the Order Management System as set out in Section H8.16(e)
- UC_KnowledgeManagement_001 - Knowledge Management in accordance with Section H8.16(g)
- UC_Schedule_001 - Forward schedule of change in accordance with Section H8.16(g)
- UC_ServiceDashboard_001 - DCC Service Status in accordance with Section H8.16(g)
- UC_ServiceAlerts_001 - DCC Service Alerts in accordance with Section H8.16(g)
- UC_FAQ_001 - FAQs in accordance with Section H8.16(g)
- UC_Manuals_001 - DCC User Manuals in accordance with Section H8.16(g)

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- UC_ServiceCatalogue_001 - Service Catalogue Publication and Call Off
- UC_RaiseSMI_001 - Raise Incidents in accordance with the Incident Management Policy
- UC_Search_001- Search as set out in clause 1.10.21
- UC_Profile_001 - User profile information as set out in clause 1.10.20

The DCC shall provide conditional access on the following basis in relation to the following Interface Transactions and shall not provide access other than on the basis set out below:

- UC_ServiceAudit_001 - Service audit trails for which access shall be granted as set out in Section H8.16(b).
- UC_HubStatus_001 - Communications Hub availability and diagnostics, for which access shall be granted to the Responsible Supplier, the Network Party or Registered Supplier Agent for the Smart Metering System of which the Communications Hub Function in question forms a part.
- UC_Reports_001 – Access to the following reports, available to any User and pertaining to that User:
 - Installation Status Smart Meter Report
 - Smart Metering Devices Status and Firmware Report
 - Smart Metering Devices Status and Model Report
 - Communications Hub with No Attached Devices Report
 - Scheduled Service Requests Report
 - Quarantined Requests Report
 - Monthly Transaction Report
 - Smart Metering Device Transaction Report
 - Firmware Activations Service Request Report
 - Load Balance Report

The DCC shall ensure that documentation relating to the format and content of such reports shall be provided to Users via secured electronic means, as and when produced or updated.

- UC_ViewSMI_001 , UC_UpdateSMI_001 - View and Update Service Management Incidents for which access shall be granted as set out in Section H9.

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- UC_OrgManager_001 – User Account management for User Personnel of Users using the DCC Identity Provider Service, for which access shall be granted to Administration Users.
- UC_ProblemManagement_001 - Problem Management for which access shall be granted in accordance with Section H9.

Where a User is entitled to conditional access to more than one Interface Transaction, the DCC shall apply permissions such that any User Personnel can access any of those Interface Transactions that the User is eligible to access, subject to such User Personnel being entitled to such access on the basis of the Job Type Role(s) as further set out in 1.9.2.

1.9.2 Administration User defined access

In addition to the full and conditional access restrictions applied by the DCC in 1.9.1, Administration Users, appointed in accordance with the process set out in the DCCKI RAPP, may further define access restrictions for User Personnel to individual Interface Transactions by assigning one or more Job Type Roles to User Personnel in relation to one or more User IDs. Where a User is using the DCC Identity Provider Service, the DCC shall enable an Administration User to do this through the use of the Interface Transaction UC_OrgManager_001, as set out in clause 1.10.19.

The DCC shall ensure that access to Interface Transactions is only provided to the Job Type Role(s) presented to the DCC by the User in the SAML assertion accompanying the request for access to the Interface Transaction, on the basis of the Interface Transactions that the Job Type Role is entitled to access as set out in the table below.

The table below shows which Interface Transactions that User Personnel with a given Job Type Role are only permitted to access (User Personnel with a given Job Type Role may only access those Interface Transactions where there is a 'Y' in the corresponding box).

Where the SAML assertion presented to the DCC when seeking to access the Interface Transaction(s) contains multiple Job Type Roles, the DCC shall grant access to that User Personnel to all of the Interface Transactions that it is entitled to access in all of those Job Type Roles.

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Categories of Interface Transaction	Job Type Role										
	All Access	Organisational Administrator	Security User	Lead Agent	Call Centre User	MI User	Service Management User	Smart Meter Operations User	Asset Management Ordering	SEC Contract Manager	Logistics
Log In UC_Login_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Smart metering inventory UC_Inventory_001 , UC_Inventory_002	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Service audit trails UC_ServiceAudit_001 , UC_ServiceAudit_002	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
SM WAN network coverage UC_CSPCoverage_001 UC_CSPCoverage_002	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y
Communications Hub availability and diagnostics UC_HubStatus_001 UC_HubStatus_002	Y	Y	N	Y	Y	N	Y	Y	N	N	Y
Forecasting and ordering of Communications Hubs and auxiliary equipment UC_CSPOMS_001	Y	Y	N	N	N	Y	N	N	Y	N	Y
Reporting UC_Reports_001	Y	Y	N	Y	N	Y	N	N	N	Y	Y
Raise service management incidents UC_RaiseSML_001 UC_RaiseSML_002 UC_RaiseSML_003 UC_RaiseSML_004	Y	Y	Y	N	N	N	Y	N	N	N	Y
Update service management incidents UC_UpdateSML_001	Y	Y	Y	N	N	N	Y	N	N	N	Y
View service management incidents UC_ViewSML_001 UC_ViewSML_002	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y
Knowledge management UC_KnowledgeManagement_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Forward schedule of change UC_Schedule_001 , UC_Schedule_002 , UC_Schedule_003	Y	Y	N	Y	Y	N	Y	Y	N	N	N
DCC service status UC_ServiceDashboard_001	Y	Y	Y	Y	Y	N	Y	Y	N	N	N
DCC service alerts UC_ServiceAlerts_001, UC_ServiceAlerts_002	Y	Y	N	Y	Y	N	Y	Y	N	N	N
FAQs UC_FAQ_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
DCC user manuals UC_Manuals_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Service catalogue publication and call off	Y	Y	N	Y	N	N	N	N	Y	N	Y

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Categories of Interface Transaction	Job Type Role										
	All Access	Organisational Administrator	Security User	Lead Agent	Call Centre User	MI User	Service Management User	Smart Meter Operations User	Asset Management Ordering	SEC Contract Manager	Logistics
UC_ServiceCatalogue_001 , UC_ServiceCatalogue_002 , UC_ServiceCatalogue_003											
User account management UC_OrgManager_001 , UC_OrgManager_002 , UC_OrgManager_003	N	Y	N	N	N	N	N	N	N	N	N
User profile information UC_Profile_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Search UC_Search_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Problem management UC_ProblemManagement_001 , UC_ProblemManagement_002	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y

1.9.3 Users granting access to other Users

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1.9.4 Users rescinding access permission to other Users

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1.10 Interface transactions

1.10.1 Freshness of Data Sources

The DCC shall update data available to Users via the Self-Service Interface to reflect the most recent information held by the DCC as soon as reasonably practicable, but in any event within 24 hours of receipt or generation of that data by the DCC.

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1.10.2 Log In

Interface transaction name	UC_Login_001
Definition	Enables User Personnel to login and access Self-Service Interface functionality
Preconditions	The User must exist within either the DCC Identity Provider Service, or a User Identity Provider Service
Inputs	<p>Username, password and the certificate which is automatically presented by the User's browser</p> <p>additionally, upon first login:</p> <ul style="list-style-type: none"> • First name • Last name • Email address • Contact telephone number
Outputs	Login confirmation

1.10.3 Smart Metering Inventory

Interface transaction name	UC_Inventory_001 (Main Flow)
Definition	Enables User Personnel to query details of the Smart Metering Inventory
Preconditions	Roles apply (see clause 1.9)
Inputs	<p>One or more of the following:</p> <ul style="list-style-type: none"> - MPxN - Device ID - full postcode and property filter (inclusive of property name / number) - UPRN - include Devices that have an SMI Status that is not 'commissioned' (checkbox)
Outputs	<p>If matches are found, a table of results is displayed, showing the following fields for each matching Device:</p> <ul style="list-style-type: none"> - Device ID - Device Type - For installed Smart Meters, the related MPxN - For all Devices that are not Type 2 Devices, SMI Status - first line of address

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	<ul style="list-style-type: none"> - UPRN - full postcode
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Interface transaction name	UC_Inventory_002 (Ext. 1 – Specific Device Details View)
Definition	Enables User Personnel to query details of the Smart Metering Inventory
Preconditions	The User has used the Smart Metering Inventory search to find a specific Device, and followed the Device ID link, to request the details view for the selected Device (and associated Devices).
Access Control	The button that allows the user to jump across to UC_ServiceAudit_002 for this Device
Inputs	<p>One of the following:</p> <ul style="list-style-type: none"> - For installed Smart Meters, the related MPxN - Device ID - full postcode and property filter - UPRN - include Devices that have an SMI Status that is not ‘commissioned’ (checkbox)
Outputs	<p>If matches are found, a table of results is displayed, showing the following fields for each matching Device and associated Devices, where applicable to the Device Type:</p> <ul style="list-style-type: none"> - Device ID - Manufacturer - Device Model - Device Type - For Electricity Smart Meters, the applicable ESME Variant - SMETS Version - For Communications Hubs, the WAN Technology Type - Firmware Version - For Communications Hubs, the CSP region in which the Device is or has been installed - MPxN - For all Devices that are not Type 2 Devices, SMI Status (including Status history) - first line of address - UPRN - full postcode <p>Associated Devices and Devices with which that Device is Associated</p>

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	<ul style="list-style-type: none"> - Device ID - SMI Status - Description of Device
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1.10.4 Service Audit Trails

Interface transaction name	UC_ServiceAudit_001 (Main Flow)
Definition	Enables User Personnel to query the service audit trail data held within the DCC Data Systems to show a record of all service activity
Preconditions	Roles apply (see clause 1.9)
Access Control	<p>In the case of ‘Read Profile Data’ and ‘Retrieve Daily Consumption Log’, any User may access the service audit records in accordance with H8.16(c). For all other service audit records, only the records pertaining to that User will be shown in search and individual message view, where the records pertaining to a User are those for:</p> <ul style="list-style-type: none"> • the User IDs for that User; and • any User IDs for which that User has been granted permission to access the information in accordance with clause 1.9.3 and such permission has not been rescinded in accordance with clause 1.9.4.
Inputs	<p>One of the following:</p> <ul style="list-style-type: none"> - MPxN - Device GUID - UPRN <p>Service Reference Variant</p> <p>From date</p> <p>To date</p>
Outputs	<p>If matches are found, a table of results is displayed, showing the following Service audit trail details for each matching Device:</p> <p><u>Field Name:</u></p> <ul style="list-style-type: none"> DCC Service User Organisation ID (User ID) Device ID GBCS Transaction Sequence Number, where required by GBCS MPxN Service Request Received Date/Time Service Response Sent Date/Time Service Reference Simplified transaction status, which shall be one of the following: <ul style="list-style-type: none"> • Success

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	<ul style="list-style-type: none"> • Failure • In Progress <p><u>Full Details:</u></p> <p>Field Name</p> <p>Request ID</p> <p>Response ID</p> <p>DCC Service User Organisation ID (User ID)</p> <p>Device ID</p> <p>CSP Region</p> <p>Mode of operation, which shall be one of the following:</p> <ul style="list-style-type: none"> • On Demand • Future Date • DSP Scheduled • DCC Only • Device Alert • DCC Alert • Meter Scheduled <p>Preceding Request ID (where applicable)</p> <p>MPxN</p> <p>Service Reference</p> <p>Service Reference Variant</p> <p>Command Variant</p> <p>Response Code</p> <p>Current Status</p> <p>Anomaly Detection Flag</p> <p>Status Change History</p>
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Interface transaction name	UC_ServiceAudit_002 (Ext. 1 – Direct Linked Search)
Definition	This is UC_ServiceAudit_001 (Main Flow) pre populated as the result of following a link on a previous page.
Preconditions	User Personnel followed a Device link on another Self-Service Interface page which has directed them to the Service audit trails search page with a value indicating that a search for a specific Device ID should be carried out immediately
Inputs	Service audit trail (selected from output of UC_ServiceAudit_001)
Outputs	Service audit trail details for the Device:

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	<p>Field Name:</p> <ul style="list-style-type: none">DCC Service User Organisation ID (User ID)Device IDSequence NumberMPxNService Request Received Date/TimeService Response Sent Date/TimeService ReferenceSimplified Transaction Status <p>Full Details:</p> <ul style="list-style-type: none">Field NameRequest IDResponse IDDCC Service User Organisation ID (User ID)Device IDCSP RegionMode of OperationPreceding Request ID (where applicable)MPxNService ReferenceService Reference VariantCommand VariantResponse CodeCurrent StatusAnomaly Detection FlagStatus Change History
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1.10.5 SM WAN Network Coverage

Interface transaction name	UC_CSPCoverage_001 (Main Flow)
Definition	Enables User Personnel to check SM WAN coverage data at a postcode level across GB in each of the three Regions
Preconditions	Roles apply (see clause 1.9)
Inputs	<p>One of the following:</p> <ul style="list-style-type: none"> - full postcode - full postcode and property name/number - a postcode outcode (all but the last three characters of a full postcode)
Outputs	<p>CSP (the CSP responsible for this location/area)</p> <p>Postcode</p> <p>Property name/number (where appropriate)</p> <p>WAN coverage availability (Yes or No)</p> <p>Anticipated coverage date (if coverage availability was No), or “No Coverage Intended”</p> <p>Likelihood of connectivity to the SM WAN at the location</p> <p>Communications Hub WAN Variant to be used</p> <p>Auxiliary equipment required</p> <p>Additional information, which shall (where applicable) contain details of:</p> <ul style="list-style-type: none"> • whether the location is included within an area that is the subject of a Service Exemption Category 2 and if so, where applicable, the date from which the location will cease to be included; and • issues giving rise to poor connectivity at the location and any information regarding likely resolution to such connectivity issues. <p>A button to initiate the download of a comma separated variable file using the above list of outputs.</p>

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Interface transaction name	UC_CSPCoverage_002 (Ext. 1 – Direct Linked Search)
Definition	Enables User Personnel to view details of WAN coverage where returned as a result of a search other than that defined in UC_CSPCoverage_001 (Main Flow).
Preconditions	User Personnel followed a Device link on another Self-Service Interface page which has directed them to the WAN Coverage search page with an argument indicating that a search for a specific postcode or premises should be carried out immediately
Inputs	None
Outputs	CSP (the CSP responsible for this location/area) Postcode Property name/number (where appropriate) Coverage availability (Yes or No) Anticipated coverage date (if coverage availability was No), or “No Coverage Intended” Likelihood of connectivity (Low/Medium/High) Communications Hub WAN Variant to be used Auxiliary equipment required Additional information

1.10.6 Communications Hub Availability and Diagnostics

Interface transaction name	UC_HubStatus_001 (Main Flow)
Definition	Enables User Personnel to attempt to diagnose and resolve incidents using the DCC's remote diagnostic tools
Preconditions	Roles apply (see clause 1.9)
Access Control	The initial Communications Hub availability and diagnostics search form has full access to all User Roles The button “Communicate With Device” is only accessible to the Responsible Supplier, The Network Party or Registered Supplier Agent, for a Smart Metering System of which a Communications Hub Function forms a part. In order to be able to carry out a full diagnostics request, the User must be the Responsible Supplier, The Network Party or Registered Supply Agent for a Smart Metering system of which a Communications Hub Function forms a part. Roles apply (see clause 1.9)

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Inputs	Communications Hub Function Device ID
Outputs	<p>Anonymised table of Service Requests giving rise to up to the last 5 Commands transacted through the Communications Hub, showing time and success status in relation to the Command being issued to the Device.</p> <p>A table showing data provided by the CSP responsible for this Communications Hub (data resident on the Communications Hub displays "Requires device communication"), and providing the following fields:</p> <ul style="list-style-type: none"> Aerial Installed Aerial Type Birth Event Network Status Deactivation Date/Time (if network status is deactivated) SMWAN Connectivity Status HAN Status Last Connection Last Tamper Last Outage Last Restore

Interface transaction name	UC_HubStatus_002 (Ext. 1 – Direct Linked Search)
Definition	Enables User Personnel to view details of selected Communications Hub availability information where returned as a result of a search other than that defined in UC_HubStatus_001 (Main Flow).
Preconditions	User Personnel followed a Device link on another Self-Service Interface page which has directed them to the Communications Hub availability and diagnostics search page with an argument indicating that a search for a specific Communications Hub should be carried out immediately
Inputs	None (Device ID selected on UC_HubStatus_001)
Outputs	<p>Anonymised table of Service Requests giving rise to up to the last five Commands transacted through the Communications Hub, showing time and success status in relation to the Command being issued to the Device.</p> <p>A table showing data provided by the CSP responsible for this Communications Hub (data resident on the Communications Hub displays "Requires Device Communication")</p>

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1.10.7 Forecasting and ordering of Communications Hubs and auxiliary equipment

Interface transaction name	UC_CSPOMS_001 (Main Flow)
Definition	Redirects User Personnel to the OMS (which enables User Personnel to submit forecasts of future orders and actual orders for Communications Hubs and Communications Hub Auxiliary Equipment requirement)
Preconditions	Roles apply (see clause 1.9)
Access Control	Any User has access
Inputs	Region selection (buttons)
Outputs	None (CSP web based OMS page opens in a new window)

1.10.8 Reporting

Interface transaction name	UC_Reports_001
Definition	Enables User Personnel to run a set of standard pre-defined and parameterised reports against DCC data as listed in clause 1.9.1. Such reports are specified in the SSI reporting specification as published on the DCC Website.
Preconditions	Roles apply (see clause 1.9)
Access Control	Reports will only display data pertaining to the User. Roles apply (see clause 1.9)
Inputs	Report-specific input parameters
Outputs	Report output data

1.10.9 Raise Incident

Interface transaction name	UC_RaiseSMI_001 (Main Flow)
Definition	Enables User Personnel to raise service management Incidents within the DCC service management systems
Preconditions	Roles apply (see clause 1.9)
Access Control	User Personnel can only raise Incidents in accordance with H9
Inputs	Incident category-specific parameters User Personnel contact details: - first name, last name, telephone number (mandatory fields) - email address (optional)
Outputs	Incident reference

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Interface transaction name	UC_RaiseSMI_002 (Ext. 1 – Direct Linked Pre Selection)
Definition	This is a special case of UC_RaiseSMI_001 (Main Flow), where User Personnel navigated from another screen, and the category of the Incident and some input fields are pre-populated
Preconditions	User Personnel followed a link on another page, indicating that they would like to raise an Incident related to the content that they are viewing, including the Communications Hub status and Communications Hub Availability and Diagnostics page to raise an incident for that Communications Hub, or a knowledge article to provide feedback on that article.
Inputs	Incident category-specific parameters
Outputs	Incident reference

Interface transaction name	UC_RaiseSMI_003 (Ext. 2 – Premises Related Incident)
Definition	This is a special case of UC_RaiseSMI_001 (Main Flow), where User Personnel chose to raise a premises related Incident, which has a more complex and specific workflow than other Incident categories
Preconditions	User Personnel chose “Premises Related Incident” in the second step of UC-RaiseSMI_001
Access Control	Roles apply (see clause 1.9)
Inputs	<p>DeviceID or MPxN</p> <p>User ID (where a User has been granted access to the Self-Service Interface on behalf of another User, in accordance with clause 1.9.3)</p> <p>Incident-specific information (optional)</p> <p>Incident summary</p> <p>Your reference</p> <p>Incident notes (optional)</p> <p>User Personnel contact details:</p> <ul style="list-style-type: none"> - first name, last name, telephone number (mandatory fields) - email address (optional)
Outputs	Incident reference

Interface transaction name	UC_RaiseSMI_004 (Ext. 3 – Direct Linked Pre Selection For Premises Related Incident)
Definition	This is a special case of UC_RaiseSMI_003, where User Personnel navigated from the Communications Hub availability and diagnostics screen, and the

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	category of the incident and input/verification of the Communications Hub have been pre-verified and pre-populated
Preconditions	User Personnel followed a link from the Communications Hub Availability and Diagnostics page, indicating that they would like to raise a premise related Incident against the Communications Hub that they are viewing.
Inputs	Incident-specific information (optional) Incident summary Business impact Incident notes (optional) User Personnel contact details: - first name, last name, telephone number (mandatory fields) - email address (optional)
Outputs	Incident reference

1.10.10 Update Service Management Incident

Interface transaction name	UC_UpdateSMI_001 (Main Flow)
Definition	Enables User Personnel to make updates to an existing Incident
Preconditions	<ul style="list-style-type: none"> • Roles apply (see clause 1.9) • User Personnel must be appropriately privileged to update the Incident in question (according to section H9). • User Personnel will have navigated from UC_ViewSMI_002
Access Control	Roles apply (see clause 1.9)
Inputs	Incident reference Type of update Update text
Outputs	Update confirmation

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1.10.11 View Service Management Incident

Interface transaction name	UC_ViewSMI_001 (Main Flow)
Definition	Enables User Personnel to view details of previously raised Incidents within the DCC Service Management System
Preconditions	Roles apply (see clause 1.9)
Access Control	The Incidents shown will be limited in accordance with H9 Roles apply (see clause 1.9)
Inputs	Incident (selected from prepopulated list of incidents)
Outputs	None (UC_ViewSMI_002 presents incident details)

Interface transaction name	UC_ViewSMI_002 (Ext. 1 – View Specific Incident)
Definition	This is a sub screen of the main UC_ViewSMI_001 (Main Flow) showing more detailed information relating to selected service management Incident information
Preconditions	User Personnel followed a link from another Interface Transaction indicating that they would like to see the details of a specific service management incident, and is appropriately privileged to view details of the incident (in accordance with H9)
Access Control	The Incidents shown will be limited in accordance with H9. Where the User did not raise the Incident, the Interface Transaction withholds from the User certain personal information about the raising individual, contact details and incident update description Roles apply (see clause 1.9)
Inputs	None (incident prepopulated from UC_ViewSMI_001)
Outputs	Summary text Incident notes Raising individual - first and last name (only visible to the User that raised the Incident) Raising organisation (User) Device (where appropriate) Communications Hub model and version (where appropriate) MPxNs associated with Smart Meter(s) related to incident - comma-separated list CSP Diagnostic output (where appropriate)

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	Postcode (where appropriate) Your reference Current status Target resolution date/time Requester contact details - first and last name, telephone number and email (not visible to interested persons) Additional contact details - first and last name, telephone number and email (not visible to interested persons) Incident priority
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1.10.12 Knowledge Management

Interface transaction name	UC_KnowledgeManagement_001 (Main Flow)
Definition	Enables User Personnel to view relevant help and support information (provided by DCC and its Service Providers), for early triage of User issues and queries, including access to the anonymous resolution details of service management problems and Incidents
Preconditions	Roles apply (see clause 1.9)
Inputs	List of all stored Articles, from which the User Personnel will select an article
Outputs	Article details - Title - Creation Date/Time - Creator - Last Modifier - Tags - Article text - Attachments (optional)

1.10.13 Forward Schedule of Change

Interface transaction name	UC_Schedule_001 (Main Flow)
Definition	Enables User Personnel to view details of any planned maintenance, changes scheduled or change freezes affecting any of the following elements of the DCC Total System: <ul style="list-style-type: none"> • Communications Hub firmware • Parse & Correlate Software • SMKI software

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	<ul style="list-style-type: none"> • SEC releases • other major DCC releases • meter firmware events
Preconditions	Roles apply (see clause 1.9)
Access Control	Meter firmware events will only be visible to Users for Devices for which they are the Responsible Supplier. Roles apply (see clause 1.9)
Inputs	None
Outputs	Planned start date/time Planned end date/time Event type System component (or release/change type) Impact severity Geographic impact Notes Full details - button linking to UC_Schedule_003

Interface transaction name	UC_Schedule_002 (Ext. 1 – Calendar View)
Definition	Enables User Personnel to view details of planned events within the DCC Systems or relating to the SM WAN in a calendar format
Preconditions	Roles apply (see clause 1.9)
Access Control	Meter firmware events will only be visible to Users for Devices for which they are the Responsible Supplier.
Inputs	None
Outputs	Calendar day cells containing items representing event types relevant to that day

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Interface transaction name	UC_Schedule_003 (Ext. 2 – View Specific Event)
Definition	Allows User Personnel, having chosen to view a specific event from UC_Schedule_001 or UC_Schedule_002, to view the full details held about the event in question
Preconditions	User Personnel followed a link from UC_Schedule_001 or UC_Schedule_002, choosing to view the full details held about a specific event
Access Control	Meter firmware events will only be visible to Users for Devices for which they are the Responsible Supplier. Roles apply (see clause 1.9)
Inputs	Event (selected on UC_Schedule_001 or UC_Schedule_002)
Outputs	<p>Event details:</p> <ul style="list-style-type: none"> - event reference - planned start date/time - planned end date/time - event notes <p>For maintenance and change freeze events:</p> <ul style="list-style-type: none"> - event type - DCC System component or Region - impact severity - geographic impact <p>For release, meter firmware and change events:</p> <ul style="list-style-type: none"> - release/change type - manufacturer's reference - manufacturer's notes - Device type and Device Model - firmware version

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1.10.14 DCC Service Status

Interface transaction name	UC_ServiceDashboard_001 (Main Flow)
Definition	Enables User Personnel to view a one page dashboard of DCC component availability for the DCC Service
Preconditions	Roles apply (see clause 1.9)
Inputs	None
Outputs	List of system components comprising: <ul style="list-style-type: none"> - DCC System component name - high level status of component - count of the number of underlying service alerts for the component Link to service alerts relating to Major Incidents

1.10.15 DCC Service Alerts

Interface transaction name	UC_ServiceAlerts_001
Definition	Enables User Personnel to view any service affecting news / alerts and other useful text (in terms of quality of service delivery and service management) to the User
Preconditions	Roles apply (see clause 1.9)
Inputs	None
Outputs	List of currently active Alerts: <ul style="list-style-type: none"> - Service Alert ID (link to UC_ServiceAlerts_002) - System component/s - listed in UC_Servicedashboard_001 - geographic impact - alert creation - expected resolution - alert closure - latest update

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Interface transaction name	UC_ServiceAlerts_002 (Ext. 1 – View Specific Alert)
Definition	This Interface Transaction allows User Personnel, having chosen to view a specific DCC Service Alert from UC_ServiceAlerts_001, to view the full details held about the alert in question.
Preconditions	User Personnel followed a link from UC_ServiceAlerts_001, choosing to view the full details held about a specific alert.
Inputs	Alert ID (specified in UC_ServiceAlerts_001)
Outputs	<p>List of currently active Alerts:</p> <ul style="list-style-type: none"> - Service Alert ID (link to UC_ServiceAlerts_002) - DCC System Component/s - listed in UC_Servicedashboard_001 - geographic impact - alert creation - expected resolution - alert closure - latest update <p>Reverse chronological list of updates for the alert, each comprising:</p> <ul style="list-style-type: none"> - date/time of update - person/entity providing update - update text

1.10.16 FAQs

Interface transaction name	UC_FAQ_001 (Main Flow)
Definition	Enables User Personnel to access helpful DCC Service Frequently Asked Questions
Preconditions	Roles apply (see clause 1.9)
Inputs	Text filter string (optional) Tag selection from list of all tags (optional)
Outputs	FAQ question and answer Attached documents (optional)

1.10.17 DCC User Manuals

Interface transaction name	UC_Manuals_001 (Main Flow)
Definition	Enables User Personnel to access a set of DCC user manuals which help Users understand how the DCC Service operates

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Preconditions	Roles apply (see clause 1.9)
Inputs	Article reference Article usefulness rating selector
Outputs	Article page: <ul style="list-style-type: none"> - title of the article - creation date/time - creator - last modification - last modifier - tags - textual description of the user manual, other document, or content

1.10.18 Service Catalogue Publication/Call Off

Interface transaction name	UC_ServiceCatalogue_001 (Main Flow)
Definition	Enables User Personnel to raise service management service requests with the DCC and track and update the status of such Requests within the DCC service management systems
Preconditions	Roles apply (see clause 1.9)
Access Control	User Personnel will only be able to see requests raised by the User with which they are associated
Inputs	By accessing this page User Personnel will see the information listed in outputs section. Raise new request option (button) – redirects User Personnel to UC_ServiceCatalogue_003
Outputs	The Self-Service Interface will display all open service catalogue requests raised by their organisation with the following fields: Service request ID (hyperlink to UC_ServiceCatalogue_002) - Work order reference Request type Raised date/time Current delivery status

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Interface transaction name	UC_ServiceCatalogue_002 (Ext. 1 – View Specific Request)
Definition	This Interface Transaction allows User Personnel, having chosen to view a specific service catalogue request from UC_ServiceCatalogue_001, to view the full details held about the request in question.
Preconditions	User Personnel followed a link from UC_ServiceCatalogue_001, choosing to view the full details held about a specific request.
Access Control	User Personnel will only be able to see requests raised by the User with which they are associated
Inputs	From selection in UC_Service_Catalogue_001
Outputs	<p>Service Request ID (hyperlink to UC_ServiceCatalogue_002) - Work order reference</p> <p>Your reference</p> <p>Request type</p> <p>Raised date/time</p> <p>Current delivery status</p> <p>Raising user</p> <p>Raising Organisation - User ID</p> <p>Requester contact details - first and last name, telephone number and email.</p> <p>Additional contact details - first and last name, telephone number and email</p>

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Interface transaction name	UC_ServiceCatalogue_003 (Ext. 2 – Browse Catalogue / Raise Request)
Definition	Allows User Personnel to browse the service catalogue and raise a new service catalogue request
Preconditions	User Personnel followed a link from UC_ServiceCatalogue_001, choosing to browse the service catalogue and/or raise a new service catalogue request.
Access Control	User Personnel will only be able to raise requests on behalf of the User with which they are associated
Inputs	<p>Business service category (selection list)</p> <p>Business service category services (selection list)</p> <p>Service request types (selection list)</p> <p>Raise request button</p> <p>First name - mandatory string</p> <p>Last name - mandatory string</p> <p>Telephone number - mandatory string</p> <p>Email address - a valid email address</p> <p>“Update contact details” button</p>
Outputs	Final confirmation screen, showing the categories, inputs and contact details that have been provided, with a “Raise Request” button

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1.10.19 User Account Management

Interface transaction name	UC_OrgManager_001 (Main Flow)
Definition	Enable Users electing to use the DCC Identity Provider Service to assign access to Interface Transactions to their User Personnel based on Job Type Roles and manage the SSI accounts and associated settings (e.g. password resets) for all subsequently created User Personnel accounts created by an Administration User.
Preconditions	<ul style="list-style-type: none"> • Roles apply (see clause 1.9) • User Personnel must be an Administration User for their organisation(s), where the process for becoming an Administration User is set out in the DCCKI Registration Authority Policies and Procedures (DCCKI RAPP). • The Administration User has pressed the “Manage My Users” button on their profile page (UC_Profile_001)
Access Control	User Personnel access is specific to the User
Inputs	<p>User search page - This shows a sortable, pageable table of User Personnel accounts, with the following details in each row:</p> <ul style="list-style-type: none"> - username (hyperlink to UC_OrgManager_002) - display name - Account Status (Active/Deleted/Locked) - last login date <p>“Create New User” button - Pressing this button redirects the user to UC_OrgManager_003</p>
Outputs	Displayed on SSI

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Interface transaction name	UC_OrgManager_002 (Ext. 1 – Manage User)
Definition	Enable Administration Users to unlock, delete or manage the details of another account created within their corporation.
Preconditions	<ul style="list-style-type: none"> • Roles apply (see clause 1.9) • An Administration User has selected an individual’s account to amend or reset in UC_OrgManager_001
Access Control	Only available to Administration Users of their organisation(s)
Inputs	<p>Username - not editable</p> <p>Account status – not editable</p> <p>First name</p> <p>Last name</p> <p>Organisations - a list of User ID(s) in relation to which the User Personnel may access the Self-Service Interface, which shall comprise:</p> <ul style="list-style-type: none"> • one or more of the User IDs of the User ; and • User IDs of any second User that has granted permission for the first User to access its information held on the Self-Service Interface in relation to one or more User IDs in accordance with clause 1.9.3. <p>Roles - a list of Job Type Roles which may be assigned to this person (as defined in clause 1.9.2).</p> <p>Update User button - allows changes made to these fields to be saved. If any fields are found to be invalid, the form is re-displayed with validation errors messages and suggestions for resolution provided.</p> <p>Delete User button - allows the account to be deleted. A confirmation dialog is displayed, which must be accepted before deleting the account.</p> <p>Reset – a checkbox allowing the account to be unlocked, in which case a new single use password is generated for the account being amended</p>
Outputs	User Personnel account changes assigned, stored or deleted.

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Interface transaction name	UC_OrgManager_003 (Ext. 1 – Create User)
Definition	Enable an Administration User to create a new person's account within their organisation.
Preconditions	<ul style="list-style-type: none"> • Roles apply (see clause 1.9) • The Administration User has pressed the “Create New User” button in UC_OrgManager_001
Access Control	Only available to Administration Users of their organisation(s)
Inputs	<p>Username - Desired username (globally unique within the DCC Identity Provider Service). If the username is not unique, the DCC will reject the username and request submission of a new username.</p> <p>First name</p> <p>Last name</p> <p>Organisations - a list of User ID(s) in relation to which the User Personnel may access the Self-Service Interface, which shall comprise:</p> <ul style="list-style-type: none"> • the User ID of the User ; and • User IDs of any second User that has granted permission for the first User to access its information held on the Self-Service Interface in relation to one or more User IDs in accordance with clause 1.9.3. <p>Roles - a list of Job Type Roles which may be assigned to this person (as defined in clause 1.9.2).</p>
Outputs	New User Personnel account created.

1.10.20 User Profile Information

Interface transaction name	UC_Profile_001
Definition	Enables User Personnel to view information about the account details with which they are accessing the Self-Service Interface, and details of the Interface Transactions that they are currently entitled to access.
Preconditions	Roles apply (see clause 1.9)
Inputs	By accessing this page User Personnel are shown the items listed in the outputs section.
Outputs	<p>Unique user identification - changes depending on the nature and type of the Identity Provider Service</p> <p>Organisations - A list of User IDs that the User is assigned to</p> <p>Roles - A list of roles (as defined in clause 1.9.2) assigned to the person.</p>

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	<p>Use cases - A list of Interface Transactions, with a “Yes” or “No” indication of whether the person has access as a result of their Job Type Role(s) (see clause 1.9.2)</p> <p>Bookmarks - A list of links to content that the person has bookmarked.</p>
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1.10.21 Search

Interface transaction name	UC_Search_001
Definition	Enables User Personnel to search for content provided by the Self-Service Interface by use of tagged keywords, or textual content of page titles and descriptions
Preconditions	Roles apply (see clause 1.9)
Inputs	A text box for entering search terms, a control allowing the User Personnel to select whether to match the terms using OR logic (any search term) or AND logic (all search terms), and a search button
Outputs	<p>Search results.</p> <p>Each search result consists of:</p> <p>The title of the located item of content (which is also a link to that piece of content).</p> <p>A short summary description of the content.</p> <p>Reasons that the content was found (i.e. matches found in title, description, tags or attached filenames).</p> <p>If no results are found matching the search criteria, a message is displayed to this effect.</p>

1.10.22 Problem Management

Interface transaction name	UC_ProblemManagement_001 (Main Flow)
Definition	Enables User Personnel to view details of open Problems related to incidents in accordance with H9
Preconditions	Roles apply (see clause 1.9)
Access Control	<p>The Problems shown will be limited in accordance with H9.</p> <p>Roles apply (see clause 1.9)</p>
Inputs	User Personnel are presented with a page which shows a list of the Problems visible to them in accordance with H9
Outputs	For each Problem the following items are displayed:

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	Problem Reference Current Problem Status Problem Summary
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Interface transaction name	UC_ProblemManagement_002 (Ext. 1 – View Specific Problem)
Definition	This is a sub screen of the main UC_ProblemManagement_001 (Main Flow) Interface Transaction showing more detailed information relating to a selected Problem.
Preconditions	User Personnel followed a link indicating that they would like to see the details of a specific Problem, and is appropriately privileged to view details of the Problem.
Access Control	The Problems shown will be limited in accordance with H9 Roles apply (see clause 1.9)
Inputs	User Personnel follows link from UC_ProblemManagement_001
Outputs	User Personnel shown a page listing the details of the Problem: Field Name Problem Reference Current Problem Status Problem Summary Problem Notes Problem priority Date Raised