DEF
SOFTWARE

DEF Software Ltd

G-Cloud 14 Service Definition Document - MasterGov

Contents

Introduction

DEF Software Limited have been providing Planning and Building Control solutions to local authorities for over 30 years and have a wealth of experience within that area. Since supplying their first customer in 1984 DEF have consolidated their position in this market by adding solutions for Land Charges, Highways and Licensing.

Within the aforementioned market, DEF Software supply their MasterGov suite of applications which includes Planning, Building Control, Legal Agreements (S106 Monitoring), Appeals, Enforcement, CIL, Land Charges, Land Drainage, Policy Monitoring and Private Sector Housing to over 50 Councils across England and Wales. Since undertaking a successful management buyout in 2009, which saw DEF formed from the Public Sector Division of Datawright Computer Services Limited, the company has doubled its customer base and added six new full modules.

The service is hosted on Microsoft Azure. The document includes information on the hosting platform.

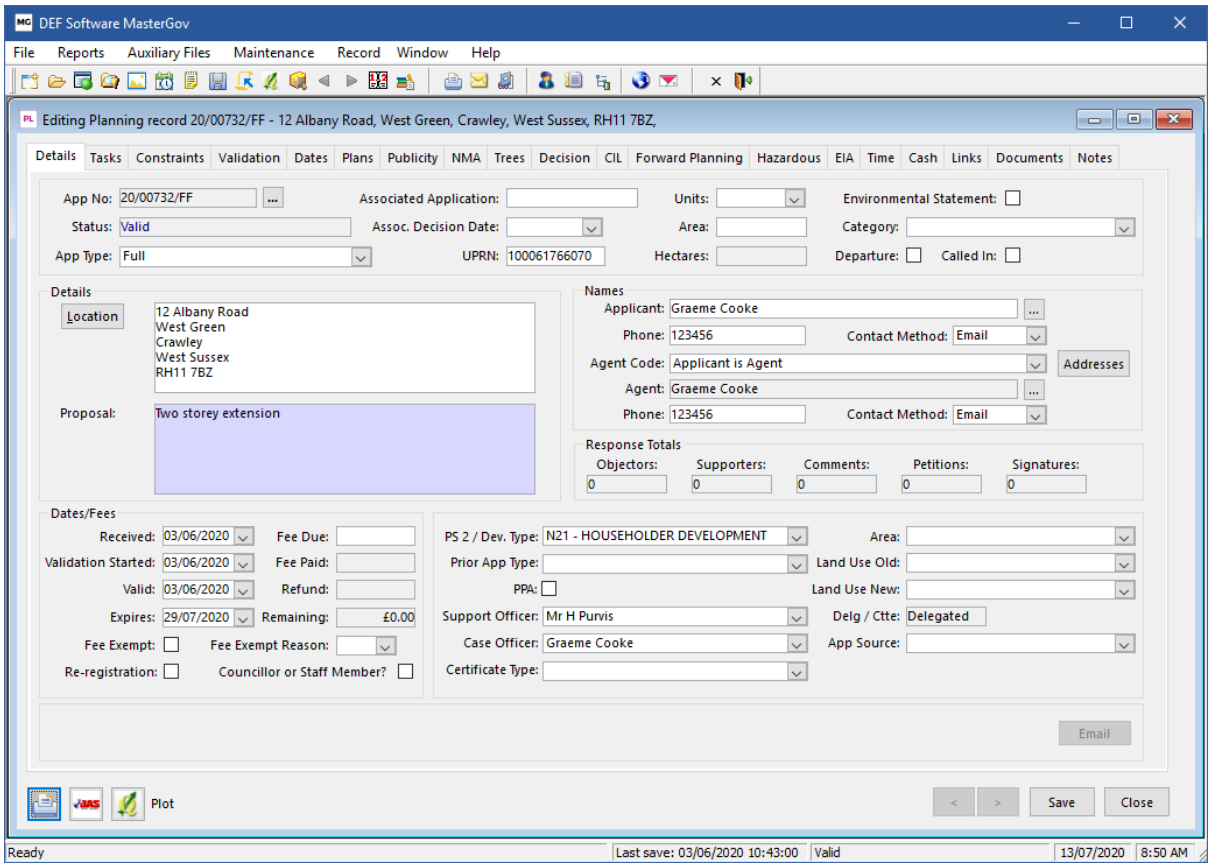
This document contains sections on Planning (including Appeals and Enforcement), County Planning (including Appeals and Enforcement), Building Control, Land Charges, Site Monitoring, Application Response, Legal Agreements, Project Monitoring, Road Adoption GIS / Gazetteer, core functionality, infrastructure, data migration, project ethos, Council resource requirements, system support & account management and DEF's roadmap.

Planning

The MasterGov Planning module is a fully featured software solution for handling the full life cycle of a Planning application. The module is supplied with independent, yet fully integrated, modules for Appeals and Enforcement. The Appeals module can process both Planning and Enforcement appeals with latter having support for enforcement grounds.

Administer all stages of the Planning Application

The Planning module has been written to provide the Council with total control over their application data throughout every stage of the planning process. The design of the module is such that the screens map closely to each phase to allow registration, validation, consultation, recommendation, decision and appeal where applicable. The software streamlines the process at each stage allowing users to work more efficiently.



The system is also capable of handling all types of planning application including, but not limited to, tree works, hazardous substances, listed building consents, pre-application advice, corporate enquiries, discharge of condition and non-material amendments. The authority defines the application types in the system and the rules governing those types.

The planning module has dedicated functionality for:

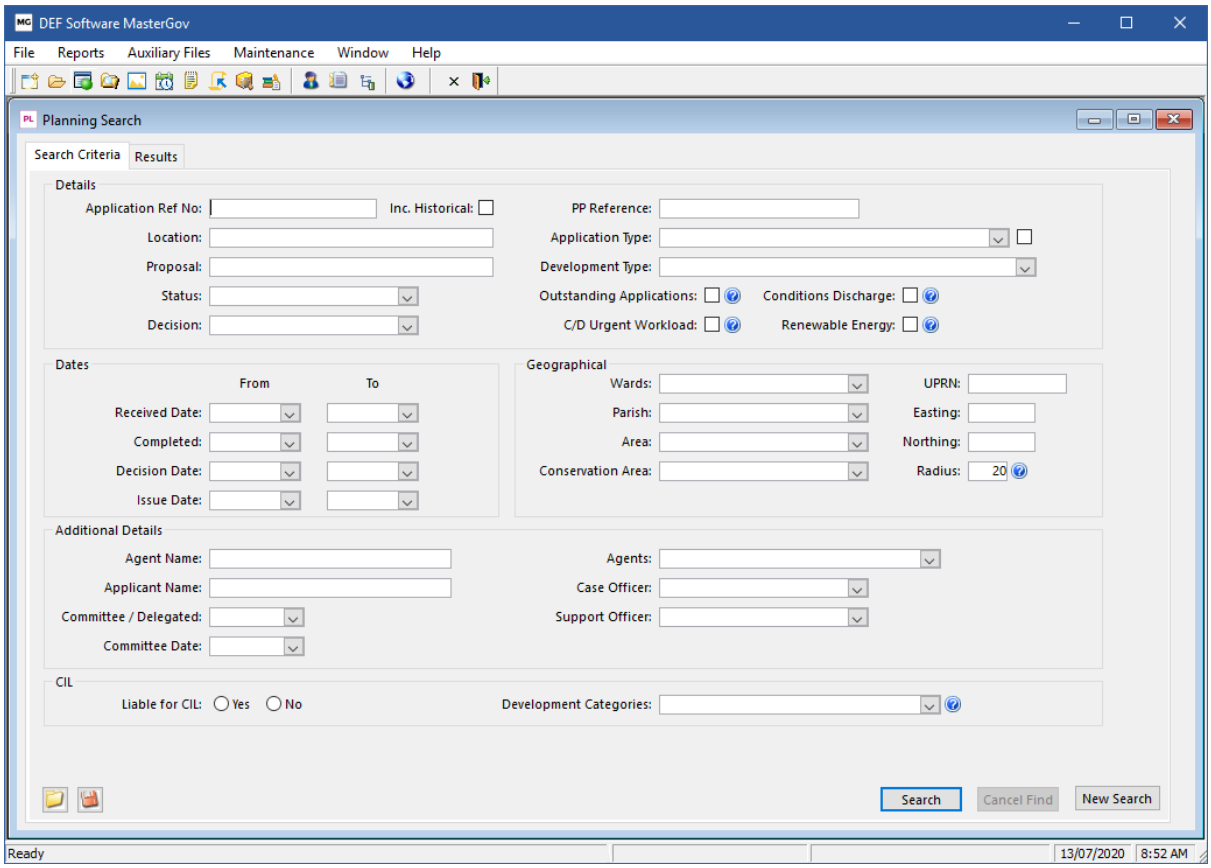
- Validation
- Extension of Time / PPA
- Consultation (electronic and paper with automation with GIS)

- Publicity
- Recommendation and Decision
- Non-Material Amendment
- Discharge of Conditions
- Forward Planning
- Time sheet reporting

The system is highly configurable with dates such as earliest and latest determination dates being automatically calculated by the system based on authority defined rules.

Search and enquiries

As with all modules in MasterGov, the planning module benefits from a twin tabbed search facility.



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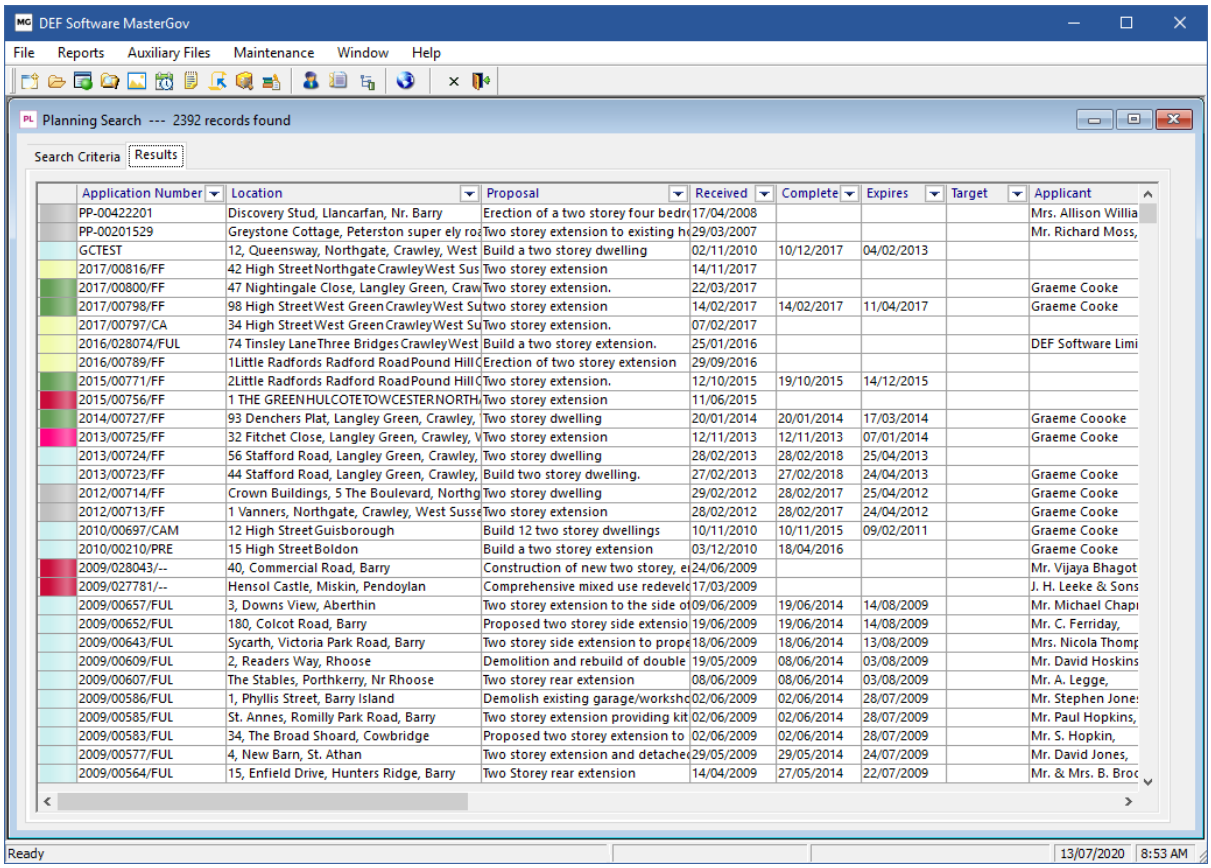


When a search is instigated any matching records will be displayed in a grid view. Colour coding is applied to quickly show the user the status of the case.

From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

Application of planning policy

Planning policies can be linked to a case either manually or via GIS. Policies can recorded on the system for use in system outputs such as the decision notice and officers can state whether the application is contrary to the policy or not. The system also allows the Council to record domestic and commercial floor space to enable reporting against local plan performance indicators.

Calculate fees and CIL

The Planning module benefits from a linked fee calculator which is hosted by the Planning Portal. Users select the required consents and the system displays the planning fee.

The system also has a full CIL Administration component built-in. This CIL provisions allows the Council to set their charging rates per geographical zone which are then applied to an application when CIL liability is confirmed. The user enters the proposed, existing and demolished floor area for each development type and the software will calculate total CIL liability at validation, determination and commencement. The CIL system handles reliefs, surcharges and payment schedules and tracks the total liability throughout.

Process appeals

The MasterGov suite contains a dedicated Appeals module. This module allows the Council to process the full life cycle of an appeal including calculating the statutory statement and questionnaire dates, sending consultation letters, informing neighbours and recording the decision along with any associated conditions.

The Appeals module has integrated links to both Planning and Enforcement and key data can be copied between modules when appeal records are created. The module benefits from the latest changes in legislation including minor commercial (shop front) applications.

Planning Enforcement

The system is supplied with an Enforcement module. This fully featured module allows the Council to manage the full life cycle of a complaint or monitoring case. From entering the initial detail and logging both the complainant(s) and relevant parties the system will guide the user through the whole process. All key dates can be recorded along with site visits, notices, compliance and witness statements.

The product also has an online complaint submission system to allow members of the public to submit complaints along with associated documents. The Enforcement module has an integrated connector to receive this information which will create a case within the database and record the attached documents. This automated process avoids double handling of data and prevents human error during data input. Once the case is loaded it can be processed as per any other.

Tree Preservation Orders

The suite is supplied with a dedicated Tree Preservation Order (TPO) module. The software allows the Council to register a TPO using a template order and consult with relevant parties. Full details of trees including individual and area can be recorded with woodland and groups stored.

All correspondence can be logged along with site visits and tree species. As with all modules the system can be linked with the DEF GIS connector and used for plotting the TPO.

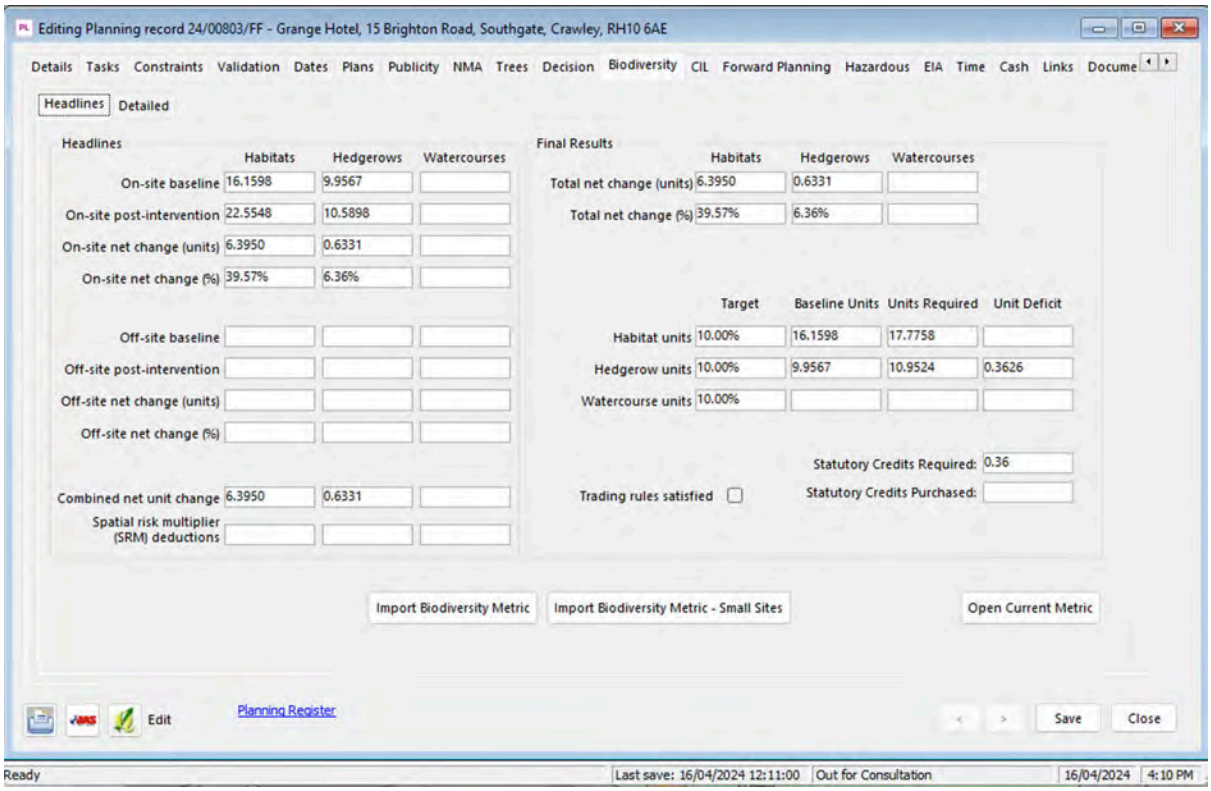
Listed Buildings

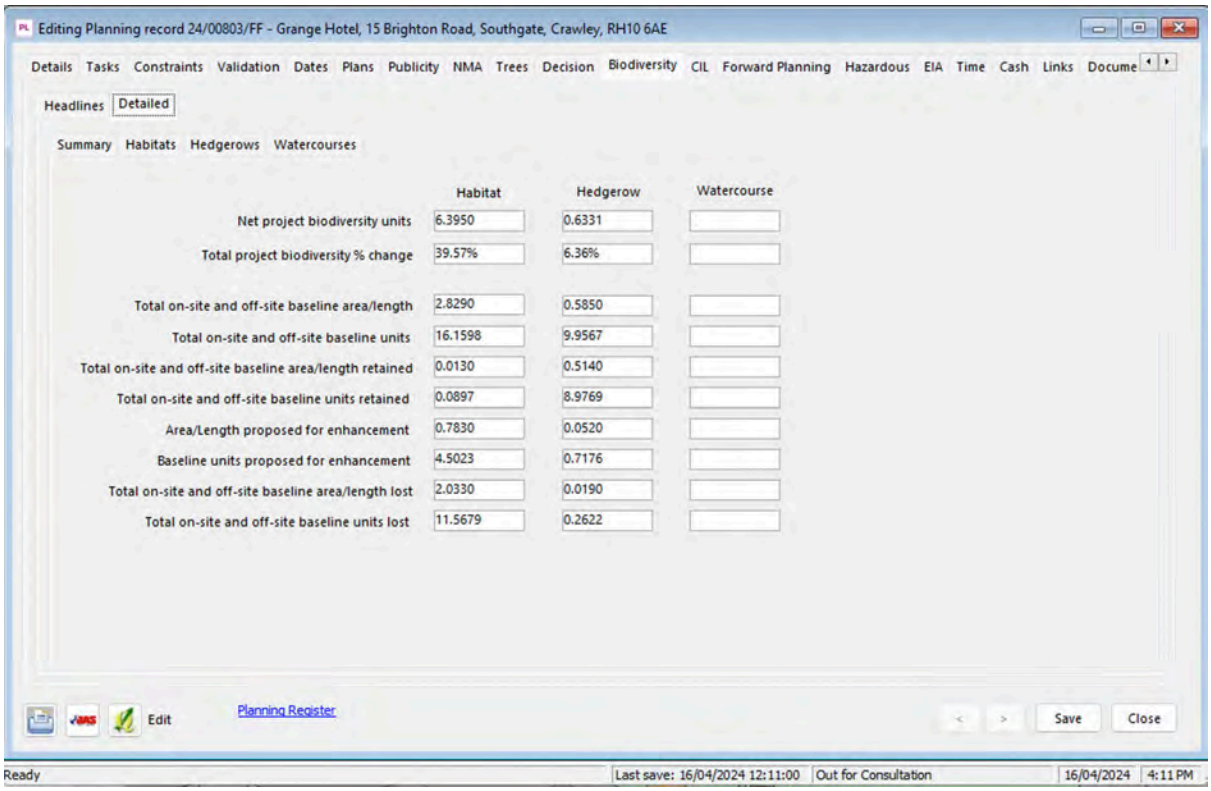
A Listed Building register module is included with MasterGov. This module allows the Council to record the details of the listing along with the site address, description of the asset, date listed, grade, English Heritage reference number and designation. The system allows for site visits to be recorded along with photographs and other files.

The module is linked to GIS and the data within linked to planning via GIS and directly. The module can also be linked to Enforcement for monitoring. Listed Building records can also be linked to other Listed Buildings where required.

Biodiversity Net Gain

The planning module is supplied with specific screens for managing the biodiversity net gain as part of the planning process. The metric spreadsheet can be loaded directly into the tab or can be loaded from the document management system. The latter is useful when the metric spreadsheet has been loaded electronically during submission of the case.



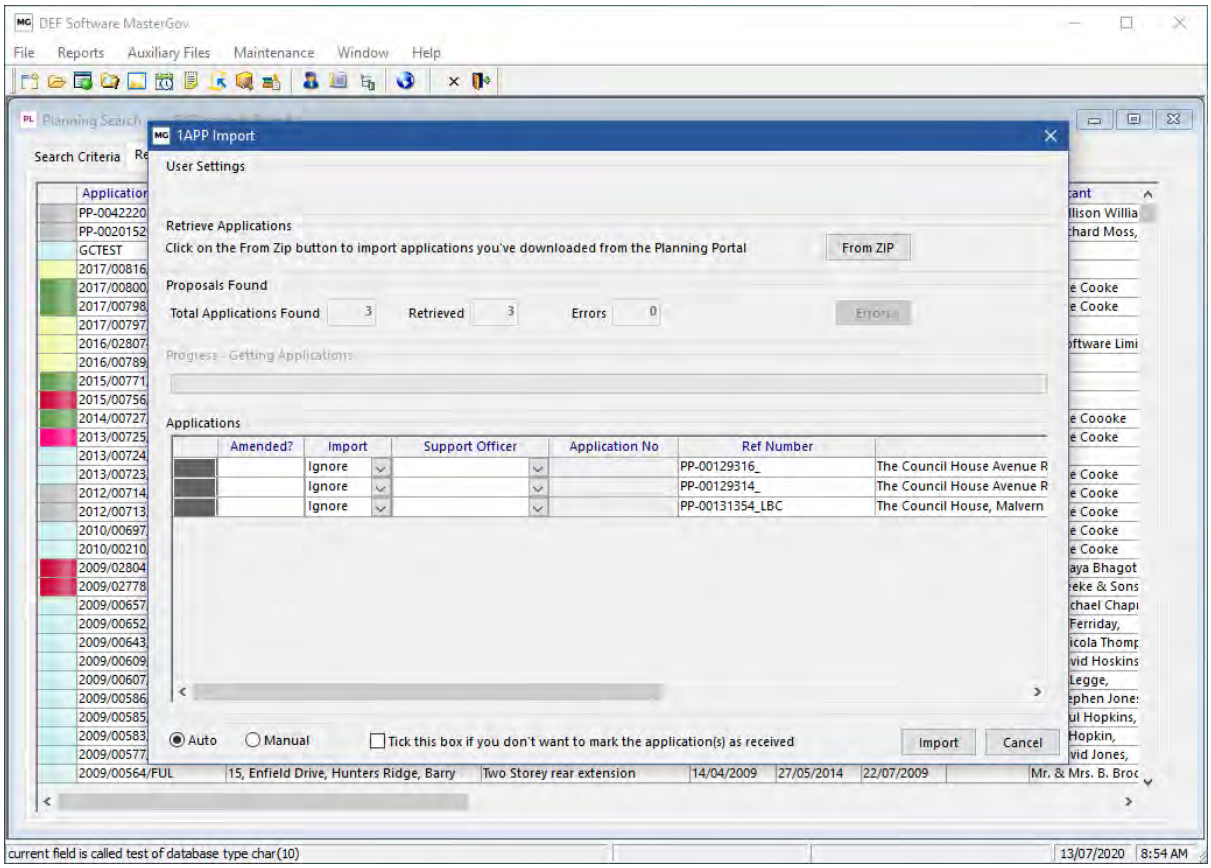


The system displays both the headlines and detailed view of the metric whilst ensuring that the user is alerted to any issues with the metric. The detail view provides both site and offsite views of habitats, hedgerows, and watercourses. A combined view of onsite and offsite can also be invoked. The detailed view also provides a summary screen to quickly show an overall view of each of the three categories.

From the biodiversity net gain screens, it is very easy to see whether the total net change percentages have been reached.

Planning Portal 1APP link

DEF Software Limited are a Planning Portal accredited partner and have been since 2005. The Planning module benefits from a totally integrated 1APP connector. This automated Windows service will download all proposals for the Council along with any associated plans / documents.



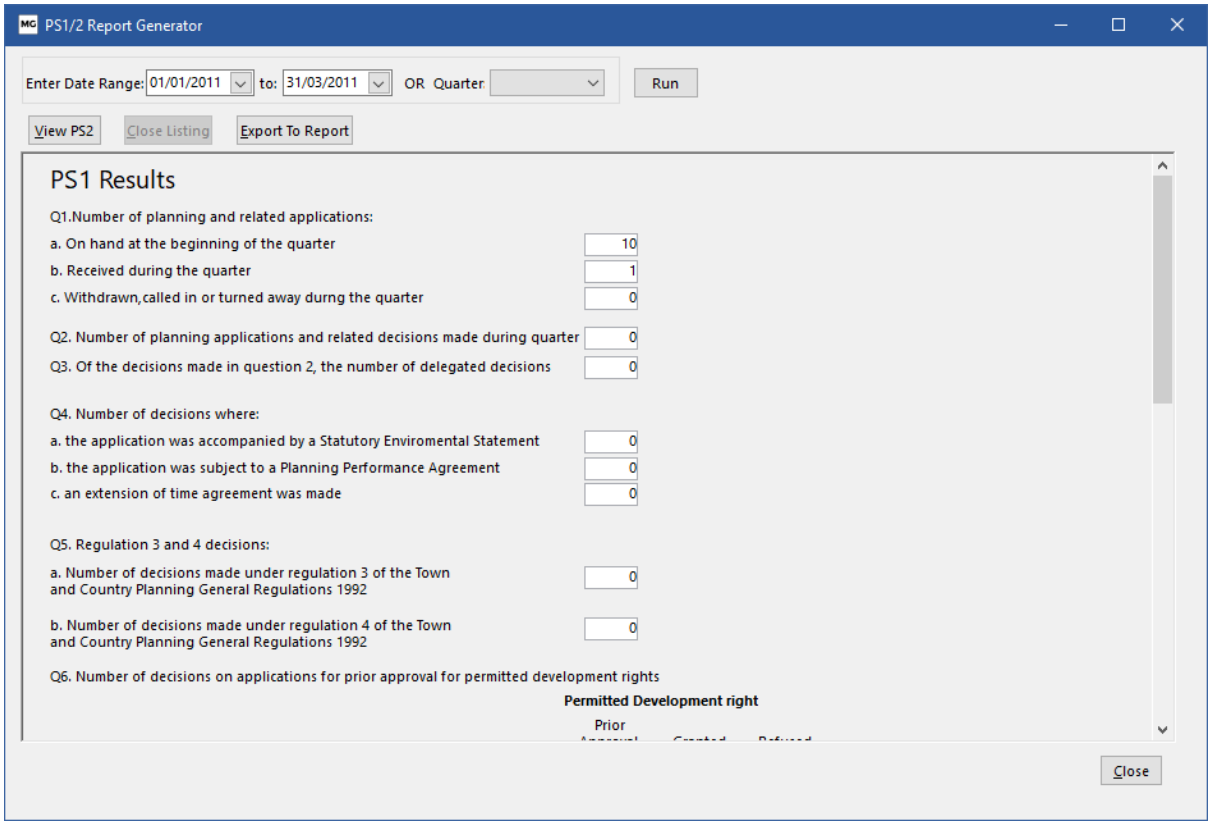
The connector creates new cases and negates the need for a user to enter the data into the system. Once downloaded, the case can be validated like any other. The connector is capable of assigning an application type by analysing the scenario number and the consent regime and comparing them against the Council's own rules. The core planning data is imported which contains applicant, agent, location, proposal, fees, dwellings, commercial floor space, hazardous substances and non-material amendments. Furthermore, a support officer can be allocated at this stage which negates the need to open each case in turn for allocation.

Any plans, drawings, forms or associated files are stored against the record and a copy of the original XML is saved to disk. Any associated documents recorded will be indexed automatically by the system using authority defined rules.

DEF support v3 of the current SOAP / XML based 1APP connector and will be releasing a version based on the Planning Porta's new JSON / REST API technology in May 2024. This new version will, for the first time, support amended applications using the Planning Portals delta data payload.

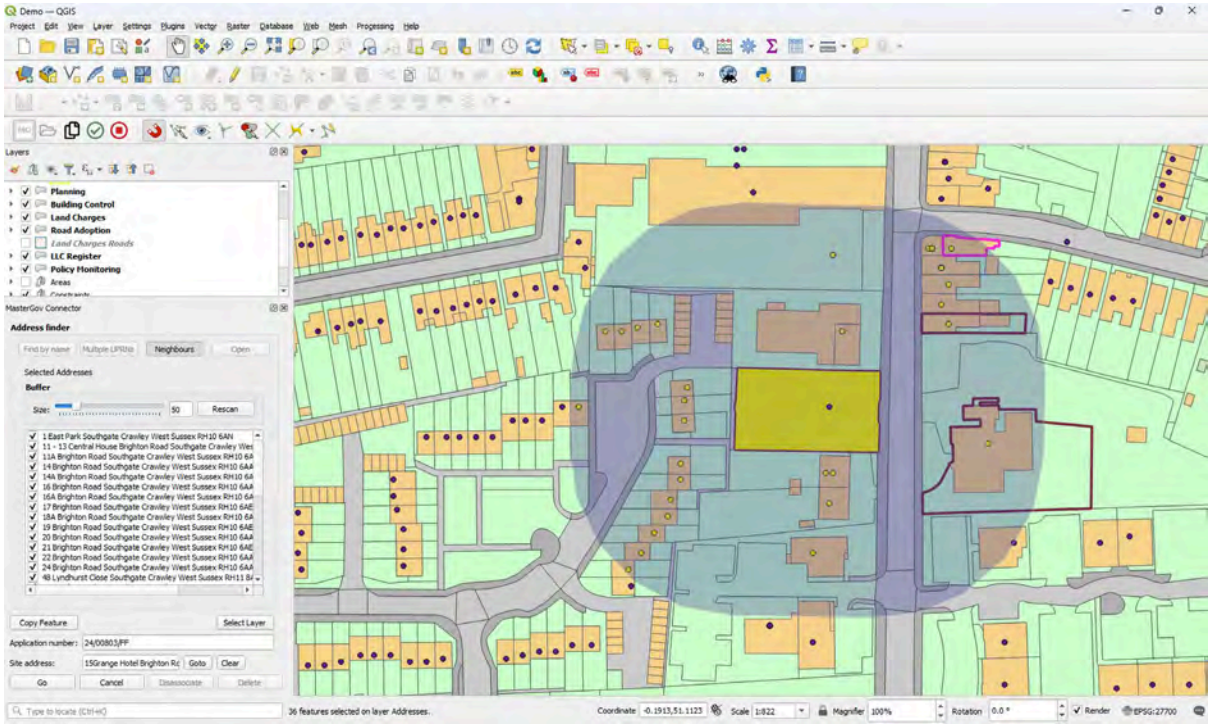
Planning Reporting

The Planning module contains a PS1/2 report which creates the report and publishes it to a MHCLG formatted spreadsheet. This report populates all questions on MHCLG's pro-forma in one automated run. Accessed from a menu inside the Planning module, this report produces the completed statistics within seconds.



GIS Integration

In addition to the general GIS information referred to later in the document MasterGov utilises spatial elements to obtain lists of constraints such as SSSI, Listed Buildings, Conservation Areas and Flood Zones etc. as well as parishes, wards, the area of red line, coordinates of the plot and a UPRN(s) if applicable. These are all automatically returned back to the Planning application once the case has been digitised in the GIS link. Furthermore, lists if neighbouring properties can also be returned from the GIS connector to make creating neighbour letters quick and easy. All modules referred to in the planning section of this document have access to the GIS integration with cases digitised on layers specific to the module.

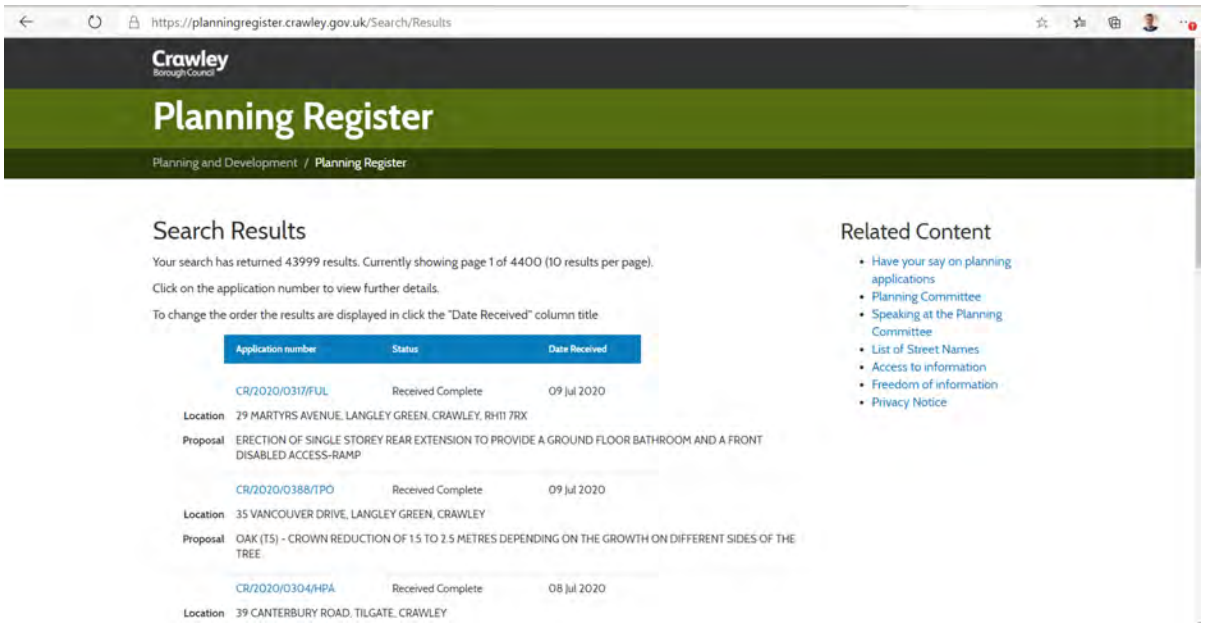


Public web interface

The Planning module benefits from an online public facing register system. This real time system enables members of the public to search and view planning applications, download associated documents, make neighbour representations and submit pre-application enquiries. In addition, both statutory and non-statutory consultees can submit their representations.

All transactions are carried out in real time with no requirement for scheduled exports to the web or replicated databases. Any representations submitted are automatically written to the case in question without the need for a user to input the data. Upon receipt of a representation the case officer or other recipient can be sent an automatic notification. Representations can also be accompanied by associated documents.

An example of a planning register from one of our customers is shown below:



All web pages conform to Level AA of the W3C Web Content Accessibility Guidelines 2.0. Pages are also skinned to match the Council's existing website look and feel. If an existing content management system is employed by the Council, DEF can even harvest a master page for the site.

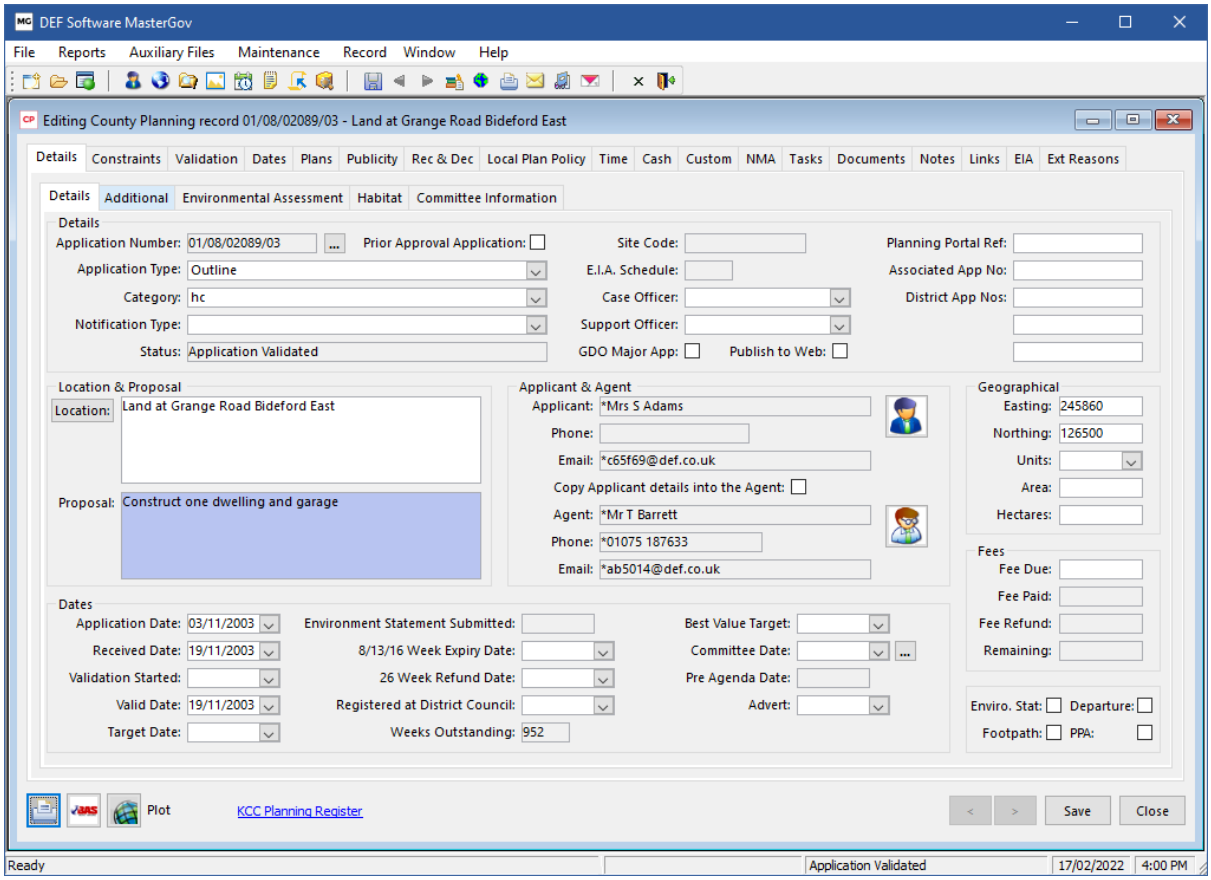
As of September 2018, all DEF produced websites are fully compliant with the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018.

County Planning

The MasterGov County Planning module is a fully featured software solution for handling the full life cycle of a County Planning application. The module is supplied with independent, yet fully integrated, modules for Appeals and Enforcement. The Appeals module can process both Planning and Enforcement appeals with latter having support for enforcement grounds. The County Planning modules are specifically designed to meet the needs of Minerals and Waste planning as well County Council applications.

Administer all stages of the Planning Application

The Planning module has been written to provide the Council with total control over their application data throughout every stage of the planning process. The design of the module is such that the screens map closely to each phase to allow registration, validation, consultation, recommendation, decision and appeal where applicable. The software streamlines the process at each stage allowing users to work more efficiently.



The system is also capable of handling all types of planning application including, but not limited to, minerals, waste, county council, pre-application advice, ROMP, discharge of condition and non-material amendments. The authority defines the application types in the system and the rules governing those types.

The planning module has dedicated functionality for:

- Validation

- Extension of Time / PPA
- EIA (Screening & Scoping)
- Consultation (electronic and paper with automation with GIS)
- Publicity
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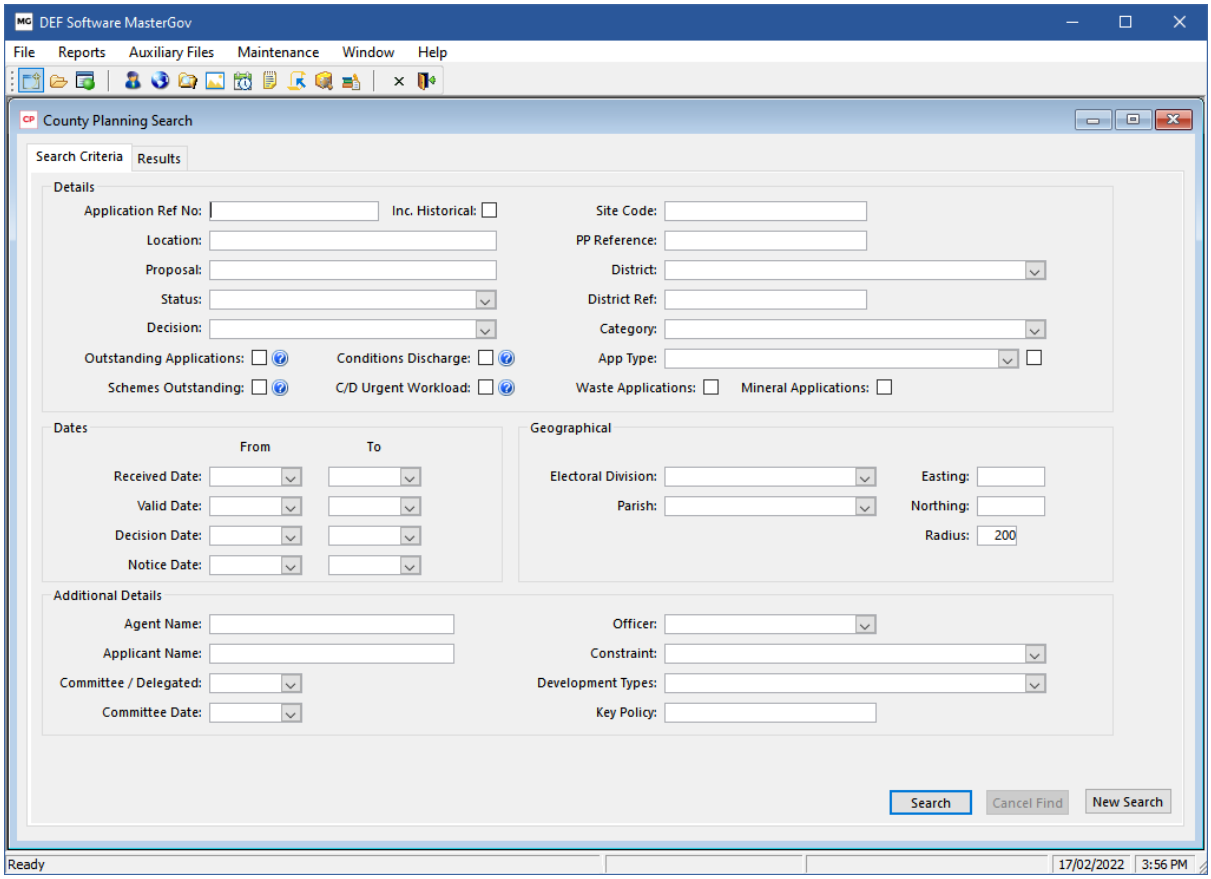

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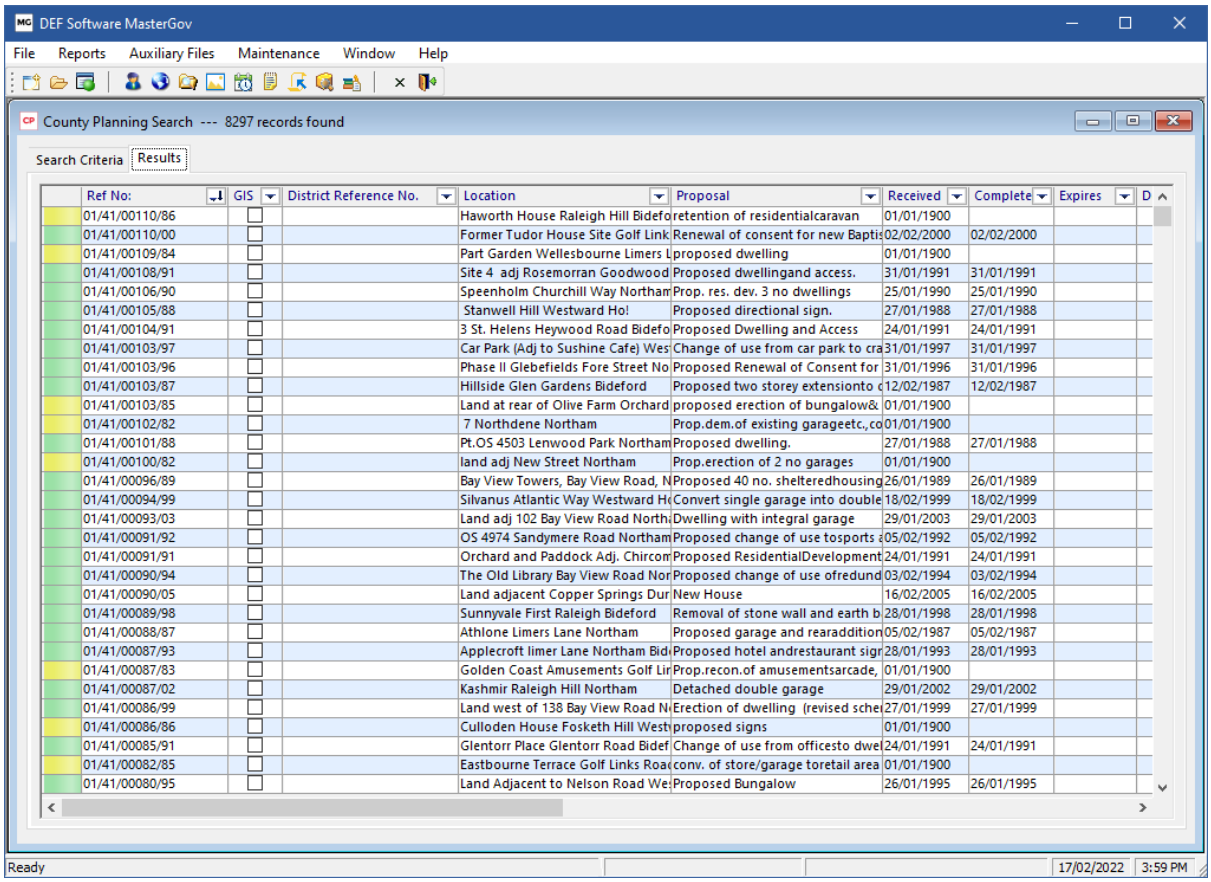

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Application of planning policy

Planning policies can be linked to a case either manually or via GIS. Policies can recorded on the system for use in system outputs such as the decision notice and officers can state whether the application is contrary to the policy or not. Each policy is given an origin so it is easy to see which local plan the policy relates to. The system also allows the Council to record annual volumes of waste disposal and minerals extraction.

Calculate fees

The Planning module benefits from a linked fee calculator which is hosted by the Planning Portal. Users select the required consents and the system displays the planning fee. At this time the Planning Portal do not provide minerals application fee calculation.

Process appeals

The MasterGov suite contains a dedicated Appeals module. This module allows the Council to process the full life cycle of an appeal including calculating the statutory statement and questionnaire

dates, sending consultation letters, informing neighbours and recording the decision along with any associated conditions.

The Appeals module has integrated links to both Planning and Enforcement and key data can be copied between modules when appeal records are created. The module benefits from the latest changes in legislation including minor commercial (shop front) applications.

Appeal information can also be displayed online alongside an associated Planning or Enforcement case.

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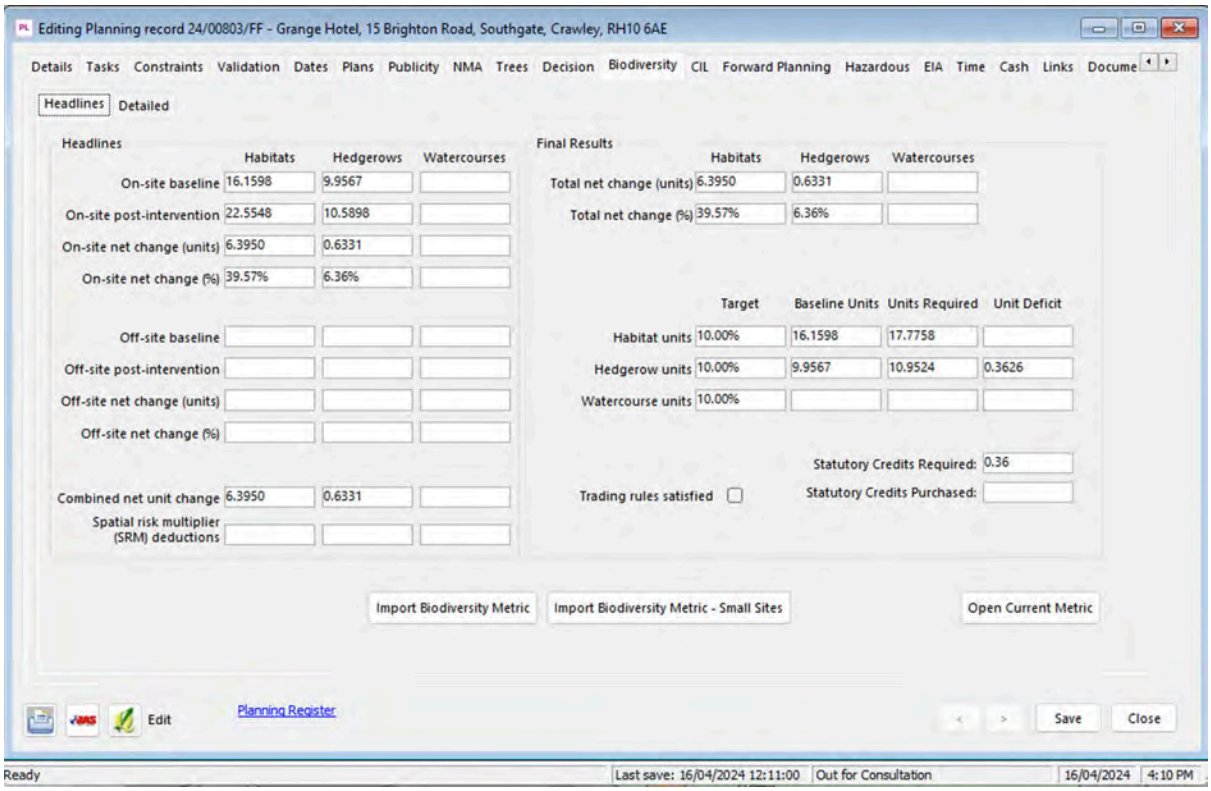

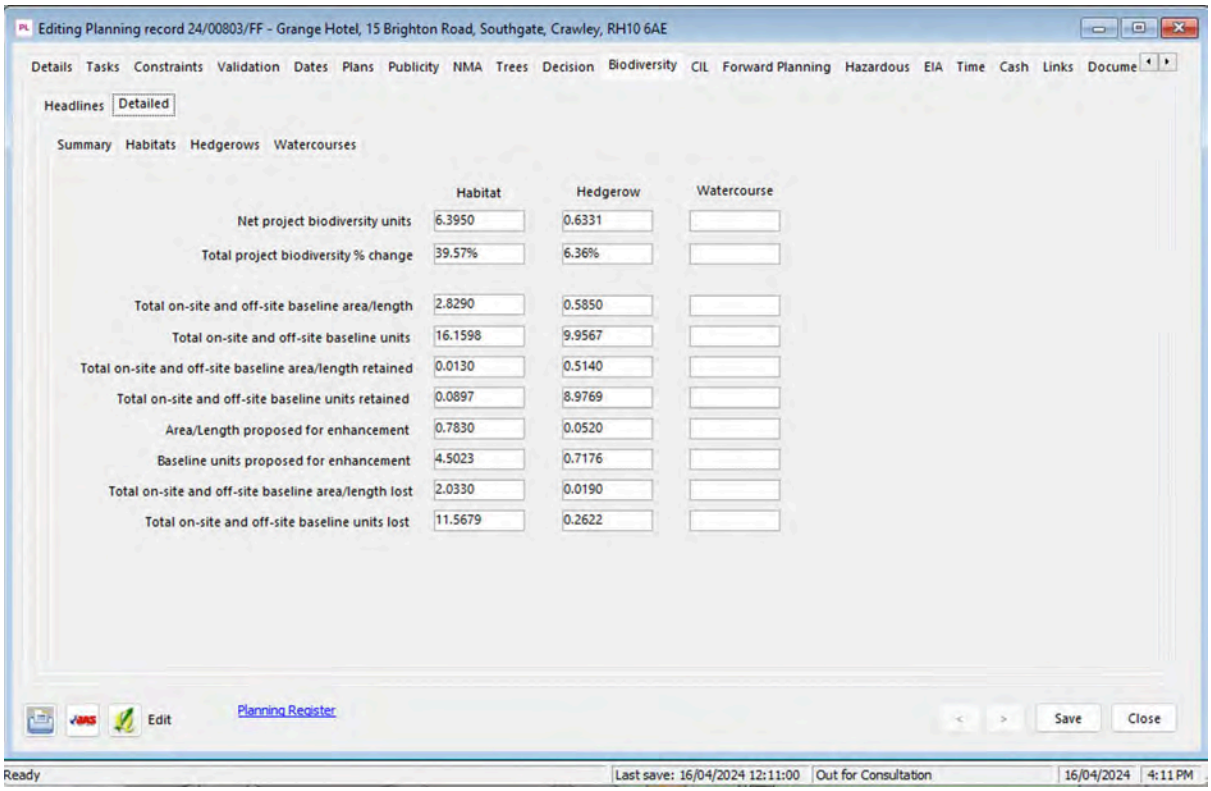

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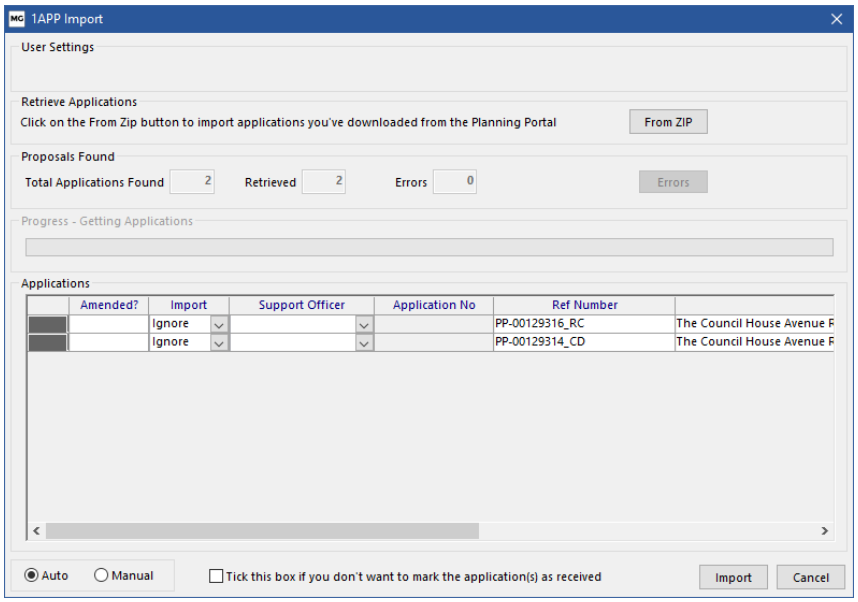

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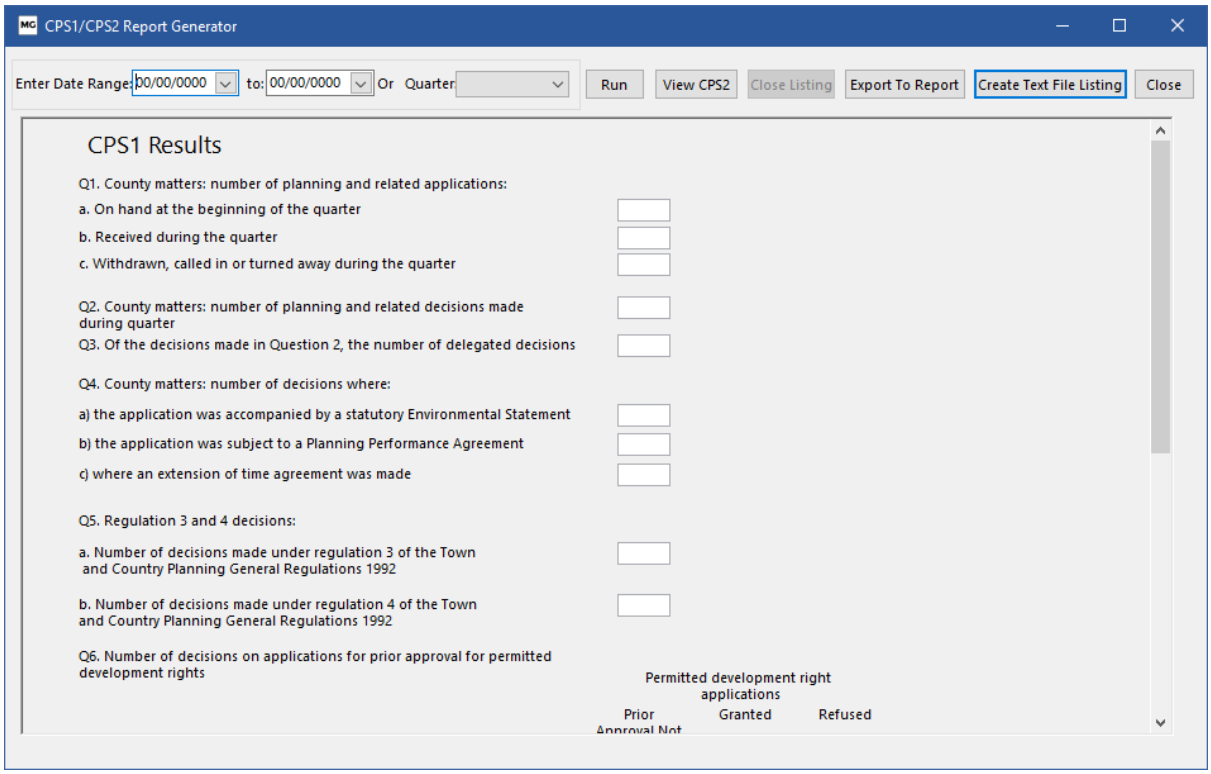

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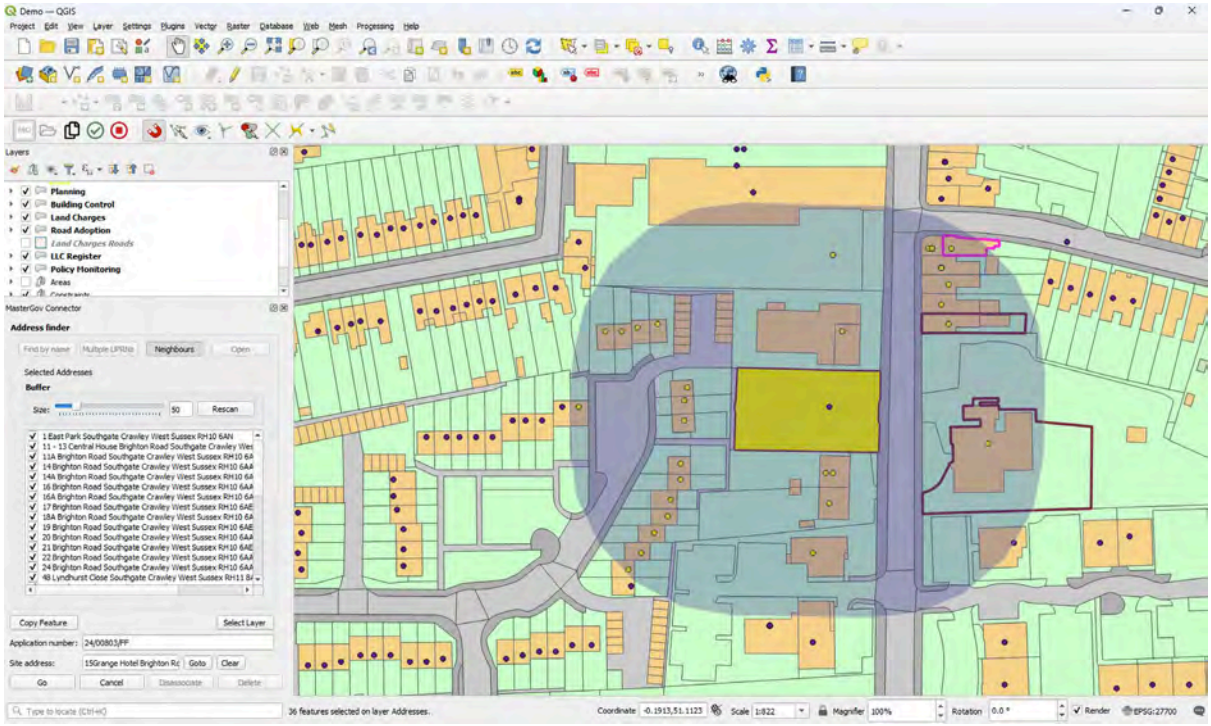

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All transactions are carried out in real time with no requirement for scheduled exports to the web or replicated databases. Documents stored in the case can be easily published to the web by users by simply clicking on the Public flag in the document management tab.

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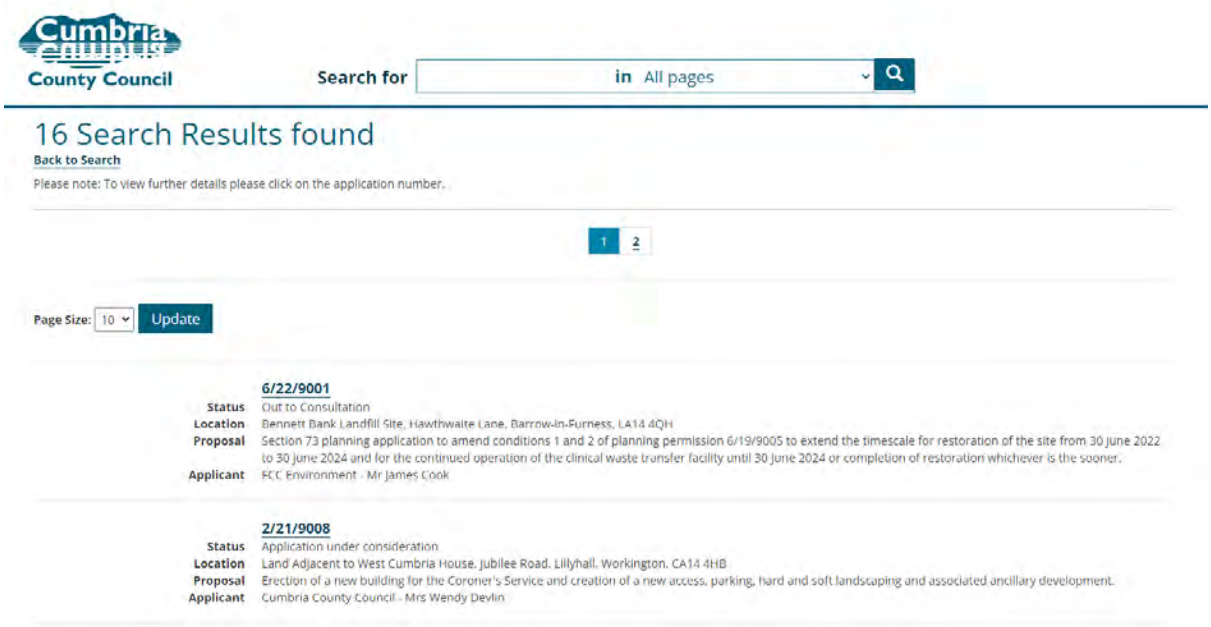

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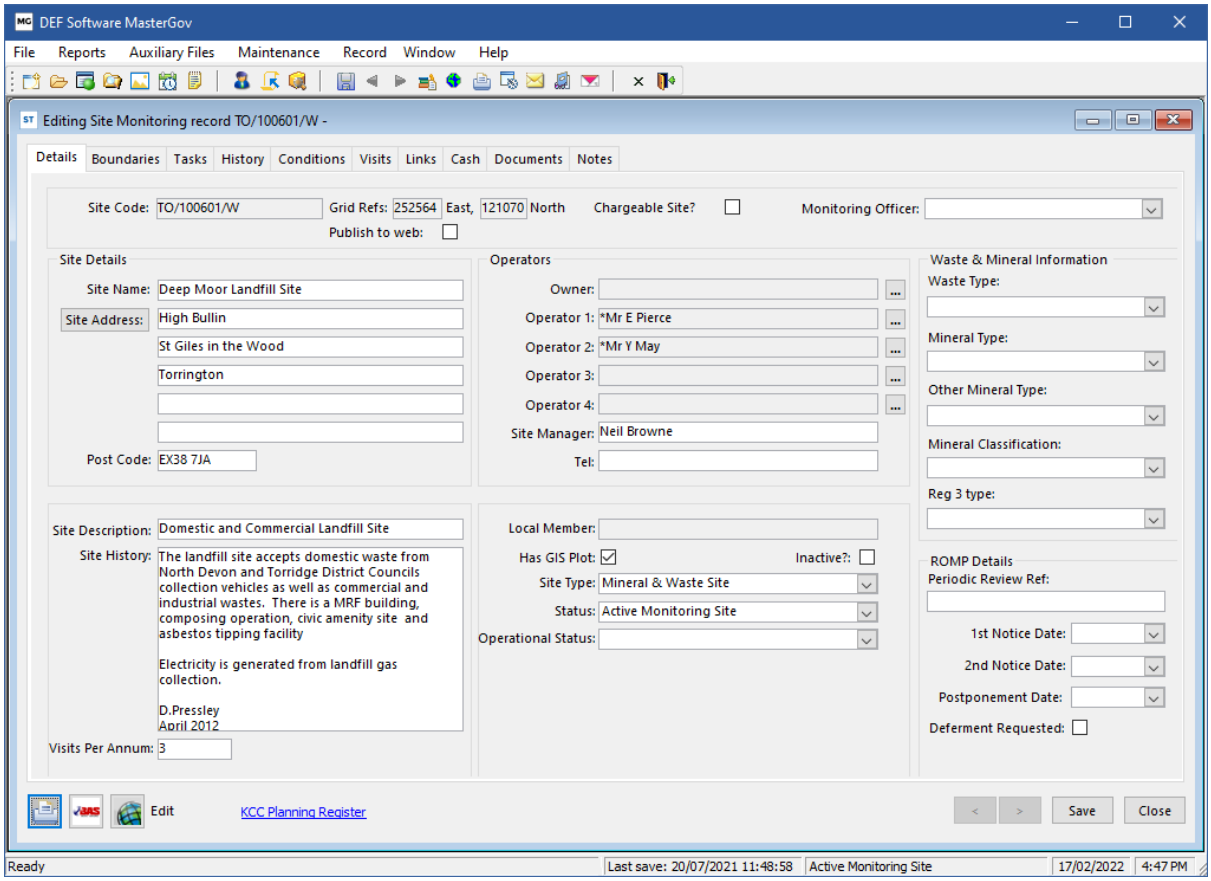
Site Monitoring

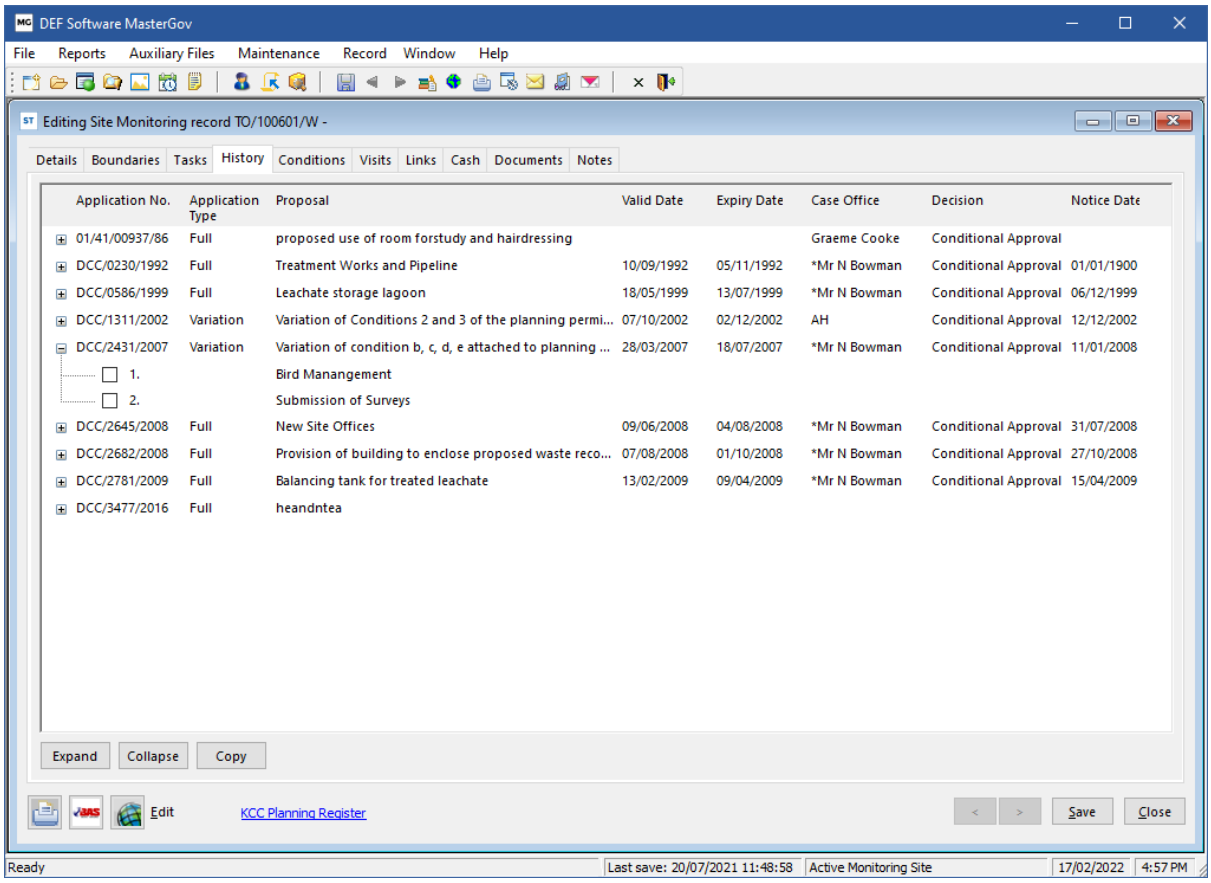
The MasterGov Site Monitoring module is a comprehensive solution for managing the monitoring requirements of mineral, waste or County Council sites. Each record is site based with Planning applications linked via the MasterGov Links sub-system.



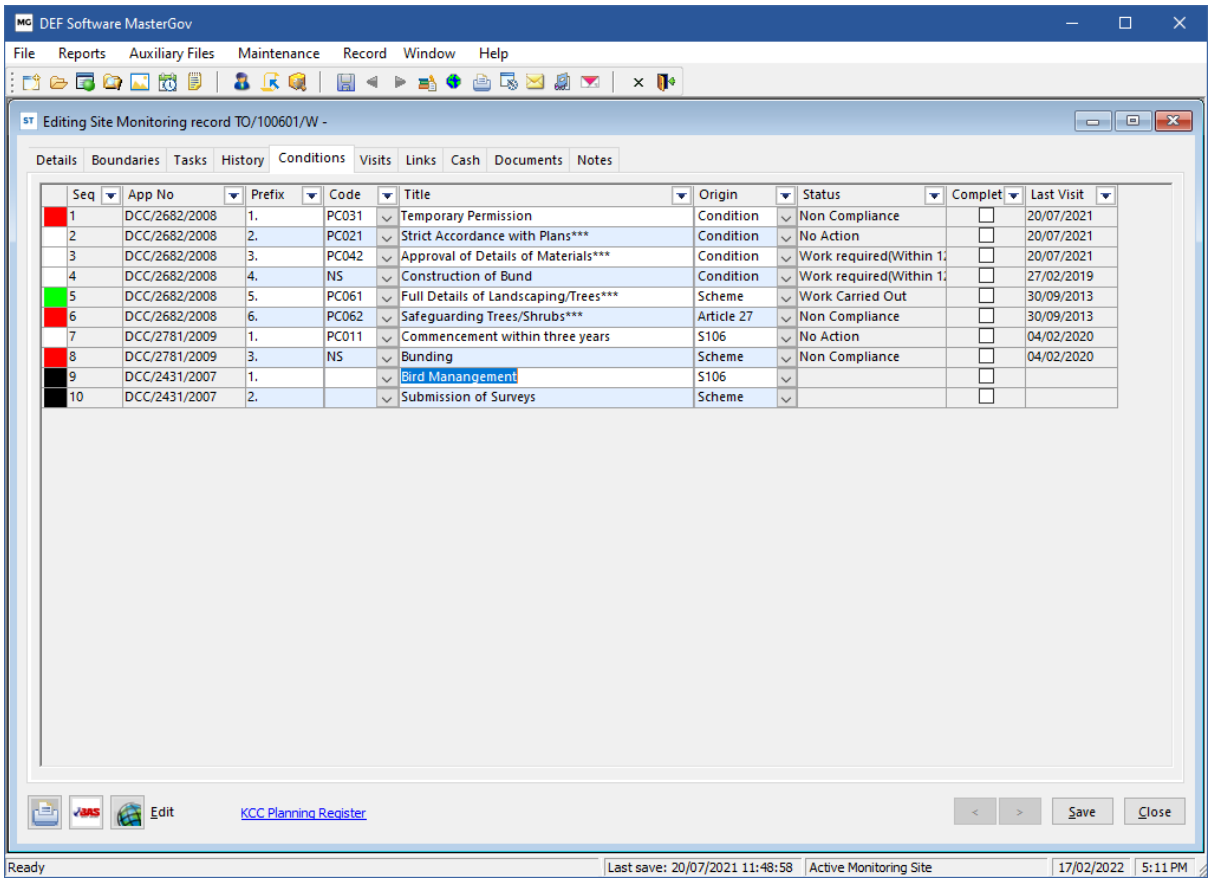
Administer and Monitor Sites

Sites are recorded in the module and Planning applications are linked to them during the registration process. The site record acts as a complete record with full details such as site name, site address, operator(s), site manager, monitoring officer, waste types, mineral types, reg 3 type, ROMP details, linked history, conditions and visits all be recorded.

Once an application is determined any associated conditions are made available to the case so that the monitoring officer can elect to monitor them. A monitoring officer simply needs to select the required conditions and click the 'Copy' button. Using the Alert / Reminder Agent officers can receive an email notification alerting them to a new determination.



Any monitored conditions are viewed on the Conditions tab where officers can see a full list of conditions along with their compliance status and last visit date. Essentially all key condition details in a single view. In addition, officers can view the visit history of any individual condition.



Site and Condition Tracking

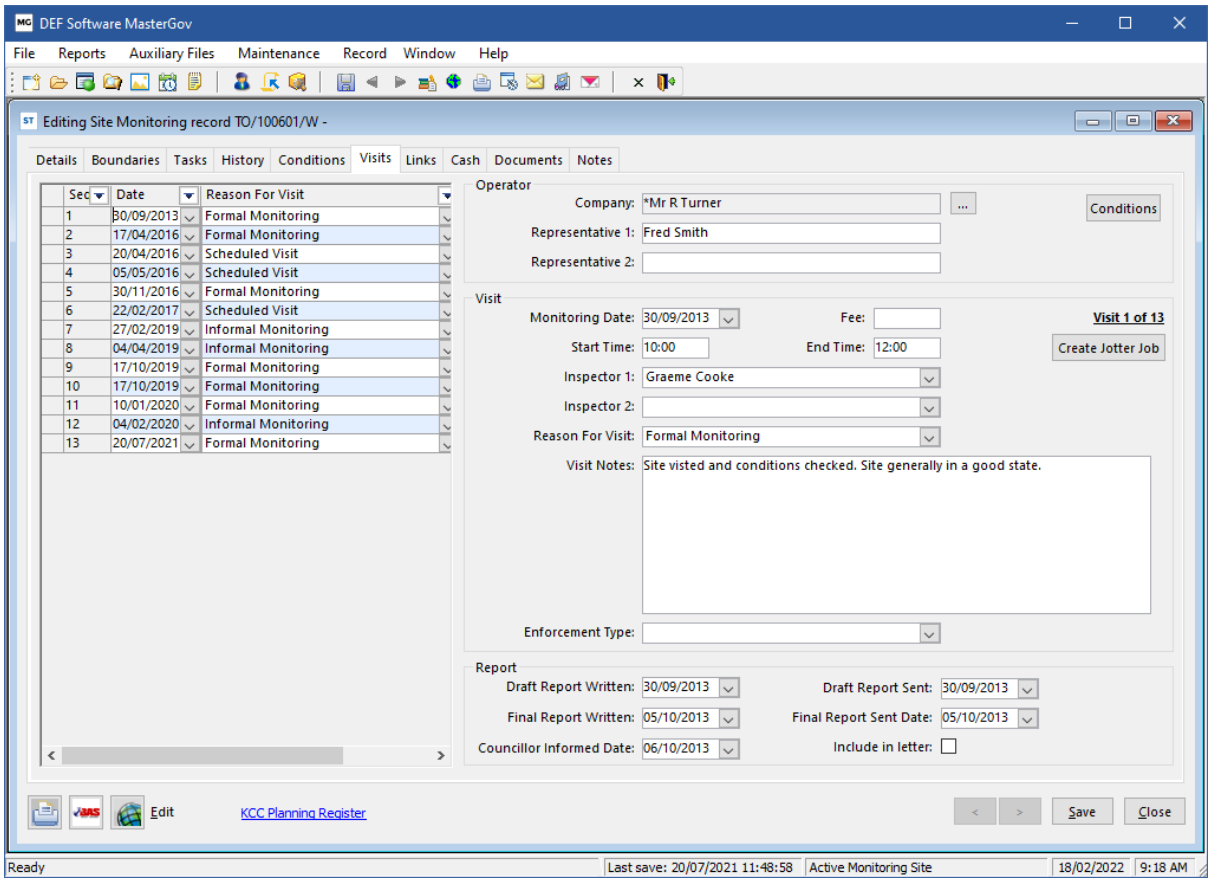
Sites can be tracked in terms of their operational status using the search facility provided with the module. Users can enter a variety of criteria to search against and all matched records will be displayed in a grid view.

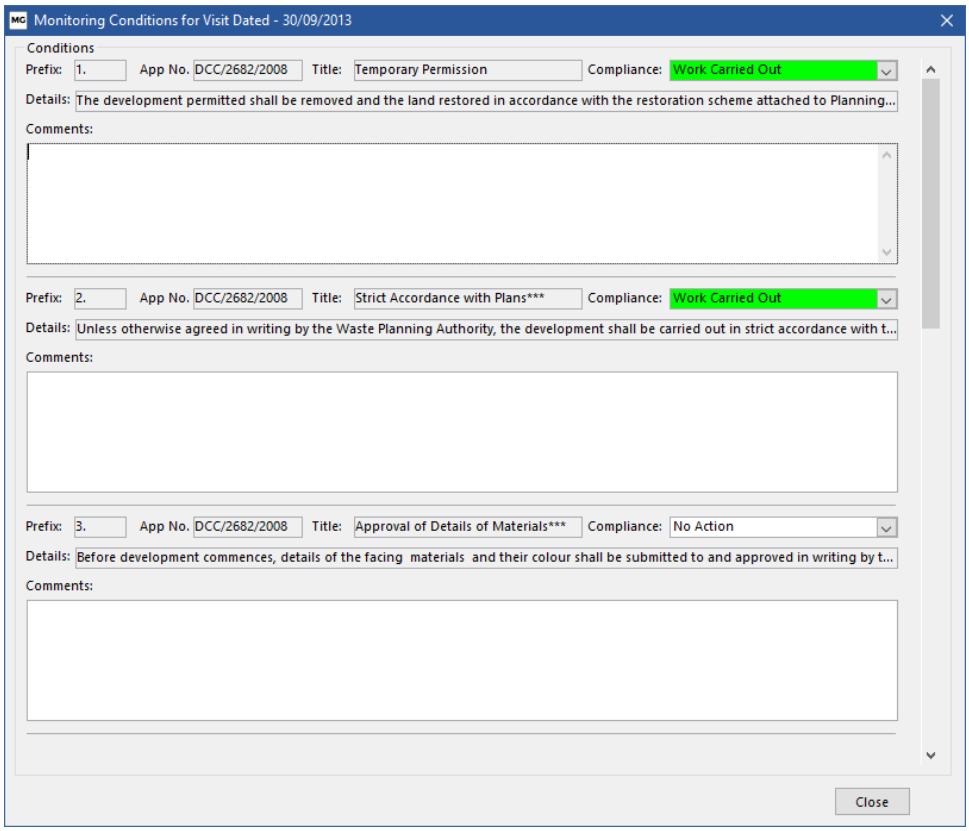
As stated above the site record also keeps a track of the compliance status of each condition. The condition list can be drawn into the visit records to make it possible to easily monitor conditions whilst on site.

Manage Site Visits

The Site Monitoring module has a dedicated screen for managing site visits. Each visit is listed in a grid on the left-hand side of the screen with the detail of the selected visit shown on the right-hand side. From the visit detail users can open a list of conditions which are being monitored on that visit. In this view the compliance status of the condition can be recorded along with any textual comments.

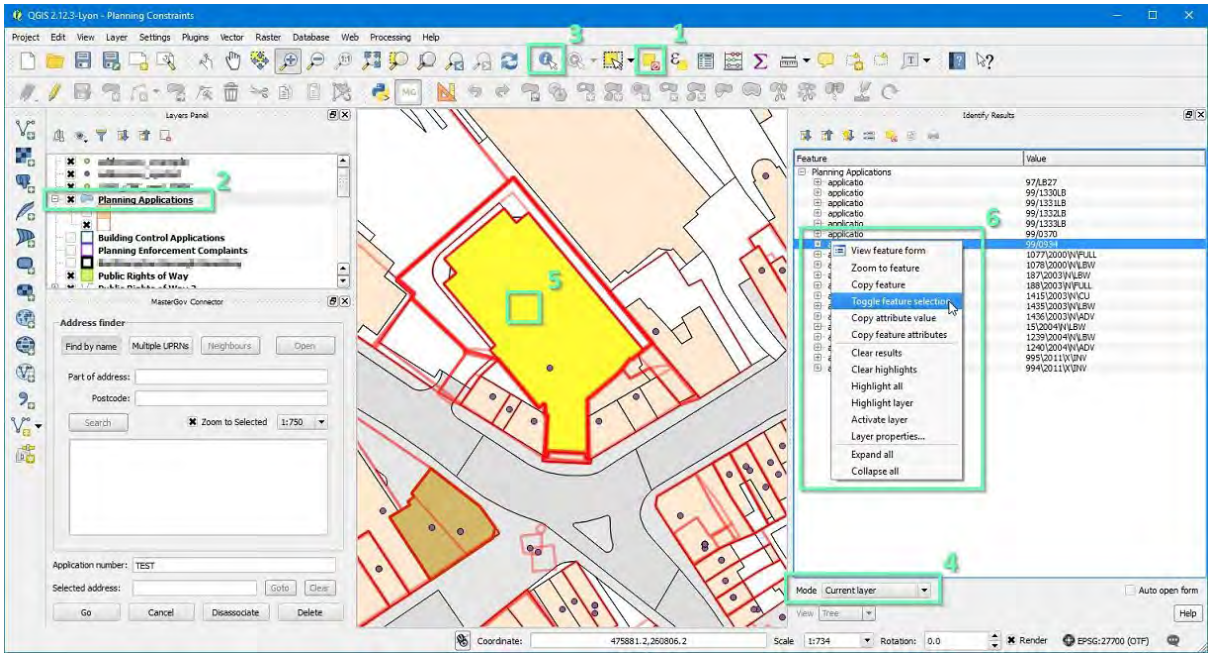
As with all parts of the system Site Monitoring can be used in conjunction with DEF's Jotter mobile working system to record details directly into a mobile device and have the resulting data automatically load to back office.


DEF Software MasterGov
File Reports Auxiliary Files Maintenance Record Window Help
Editing Site Monitoring record TO/100601/W -
Details Boundaries Tasks History Conditions Visits Links Cash Documents Notes
Sec Date Reason For Visit
1 30/09/2013 Formal Monitoring
2 17/04/2016 Formal Monitoring
3 20/04/2016 Scheduled Visit
4 05/05/2016 Scheduled Visit
5 30/11/2016 Formal Monitoring
6 22/02/2017 Scheduled Visit
7 27/02/2019 Informal Monitoring
8 04/04/2019 Informal Monitoring
9 17/10/2019 Formal Monitoring
10 17/10/2019 Formal Monitoring
11 10/01/2020 Formal Monitoring
12 04/02/2020 Informal Monitoring
13 20/07/2021 Formal Monitoring
Operator
Company: *Mr R Turner
Representative 1: Fred Smith
Representative 2:
Conditions
Visit
Monitoring Date: 30/09/2013
Fee:
Visit 1 of 13
Start Time: 10:00
End Time: 12:00
Create Jotter Job
Inspector 1: Graeme Cooke
Inspector 2:
Reason For Visit: Formal Monitoring
Visit Notes: Site visted and conditions checked. Site generally in a good state.
Enforcement Type:
Report
Draft Report Written: 30/09/2013
Draft Report Sent: 30/09/2013
Final Report Written: 05/10/2013
Final Report Sent Date: 05/10/2013
Councillor Informed Date: 06/10/2013
Include in letter:
Edit
KCC Planning Register
Save
Close
Ready
Last save: 20/07/2021 11:48:58
Active Monitoring Site
18/02/2022
9:18 AM


Monitoring Conditions for Visit Dated - 30/09/2013
Conditions
Prefix: 1. App No. DCC/2682/2008 Title: Temporary Permission Compliance: Work Carried Out
Details: The development permitted shall be removed and the land restored in accordance with the restoration scheme attached to Planning...
Comments:
Prefix: 2. App No. DCC/2682/2008 Title: Strict Accordance with Plans*** Compliance: Work Carried Out
Details: Unless otherwise agreed in writing by the Waste Planning Authority, the development shall be carried out in strict accordance with t...
Comments:
Prefix: 3. App No. DCC/2682/2008 Title: Approval of Details of Materials*** Compliance: No Action
Details: Before development commences, details of the facing materials and their colour shall be submitted to and approved in writing by t...
Comments:
Close

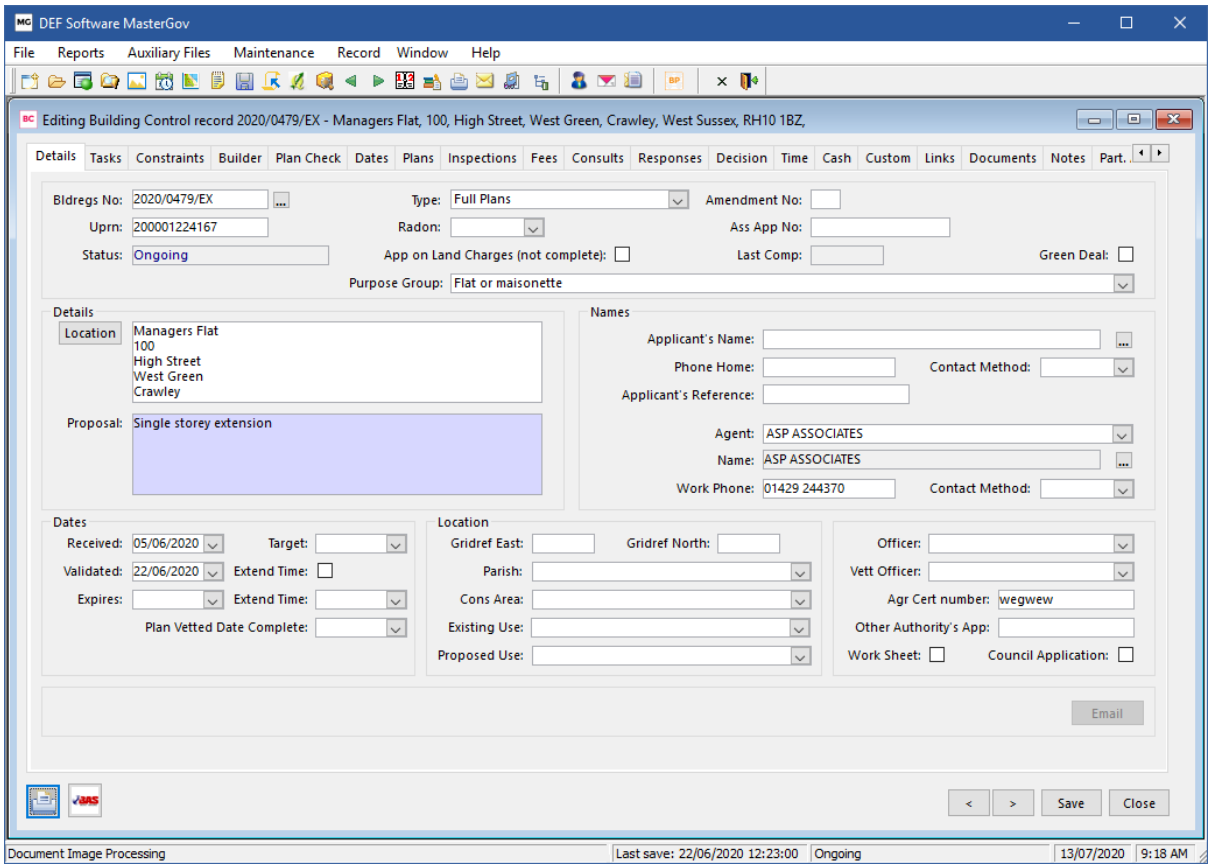
GIS Integration

In addition to the general GIS information referred to later in the document MasterGov utilises spatial elements to obtain lists of parishes, wards, districts, the area of red line, coordinates of the plot and a UPRN(s) if applicable. These are all automatically returned to the Site Monitoring module once the case has been digitised in the GIS link. Furthermore, the system has additional optional error tracking to ensure that Planning applications linked to a site are plotted within the site boundary .



Building Control

The MasterGov Building Control module is a comprehensive solution for managing the full life cycle of all Building Control applications including Initial Notices, Dangerous Structures, Demolitions and Partner Authority cases. The product also benefits from the Building Portal national Building Control submission system which allows the Council to take applications from applicants and agents in an electronic and fully integrated fashion.



Administer applications and payments

Applications can be entered manually, imported from the Planning Portal, DEF's Building Portal or via the built-in resubmission system. All application types can be inputted into the module with special interfaces provided for inputting and editing Initial Notices and quotes. Every facet of the case can be recorded and managed including consultation, demolition letters, plans checking, decision making, plots, inspections, fees and partner details.

The module has two quote / fee generators which is based upon the Council's own fee schedules and allows them to send electronic quotes to applicants. One uses categorised fees whilst the other is based on time associated with plans checking, admin and inspections. In addition fees can be calculated within a case and both the plan and inspection fee are displayed to the user. Users can drag and drop specific fee items directly into the system from a list of fee tables.

Financial records can be added to the system and links to be accounts packages can be provided. The system can also be set to produces invoices directly from plots / work items.

Application Tracking

Applications can be tracked using the search facility provided with the module. Users can enter a variety of criteria to search against and all matched records will be displayed in a grid view. The search results also contain a colour coding which represents the status of the case.

As with all modules the Building Control module benefits from a Council defined status system. Whenever an application is saved the pre-defined rules are applied and the status of the application is updated accordingly.

Manage site inspections

The Building Control module has a dedicated screen for managing both plots and inspections. Plots and or work items are listed in the case with the ability to record bedroom count, new address, individual fees, UPRN, plot number, commencement and completion dates, fee table item and SAP value. There are a number of productivity tools associated with plots such as plot number fill, editing multiple plots and multiple inspection creation.

Inspection records are linked directly to plots and the Council controls the types of the inspections available. The inspection record screen allows users to record date, inspector, weather, temperature, time spent, mileage travelled, type of inspection, pass or failure, failure reason, free text inspection report and further action required.

Any number of inspection records can be created along with any number of plots. When the first commencement inspection is complete, the commencement date for the entire case will be set. When the final completion inspection is complete then the completion date for the entire case will be set. Whenever a commencement or completion inspection is carried out the dates on the plot will be updated automatically.

Support for dangerous, special and temporary structures and demolition works

The Building Control module already has support for dangerous, special & temporary structures and demolition works. The Council can create their own application types which are then mapped to special types such as Initial Notice, Regularisation, and Unauthorised Work etc.

Dangerous, special and temporary structures can be recorded along with the date the request was made, the location of the structure, details of the structure, contact details including telephone numbers and status. Specific to dangerous structures the Council can record section applicable, emergency action required and works to be completed by. A notification facility is available for the Council to inform other parties of the structure.

The Building Control module allows the Council to record full details of demolitions. As with other types of case the system can generate and store the reference number, record the date the request was made, the location of the work, details of what work is being carried out, contact details including telephone numbers, how many dwellings are involved and status. Specific to demolitions the Council can record services to be disconnected, details of any dangerous materials, date of demolition and contract period. For demolition cases the Council can send out neighbour letters and use the GIS connector to ascertain the neighbours to consult.

Planning Portal Integration

DEF Software Limited are a Planning Portal accredited partner and have been since 2005. The Building Control module benefits from a totally integrated portal connector. This automated Windows service will download all applications for the Council along with any associated plans / documents.

The connector creates new cases and negates the need for a user to enter the data into the system. Once downloaded, the case can be validated like any other. The connector is capable of assigning an application type by analysing the application type supplied and comparing it against the Council's own rules. The core Building Control data is imported which contains core information such as applicant, agent, location, proposal etc. Furthermore, a support officer can be allocated at this stage which negates the need to open each case in turn for allocation.

Any plans, drawings, forms or associated files are stored against the record and a copy of the original XML is saved to disk. Any associated documents recorded will be indexed automatically by the system using authority defined rules.

Statutory Reporting

The Building Control module contains a P2 housing report which creates the report in the required format. Accessed from the online reports area within the module, this report produces the completed statistics within seconds.

In addition, the system supports the latest Building Safety Regulator monitoring arrangements. The system contains the fields required to meet the requirements and is supplied with a report pro-forma to generate the KPI statistics.

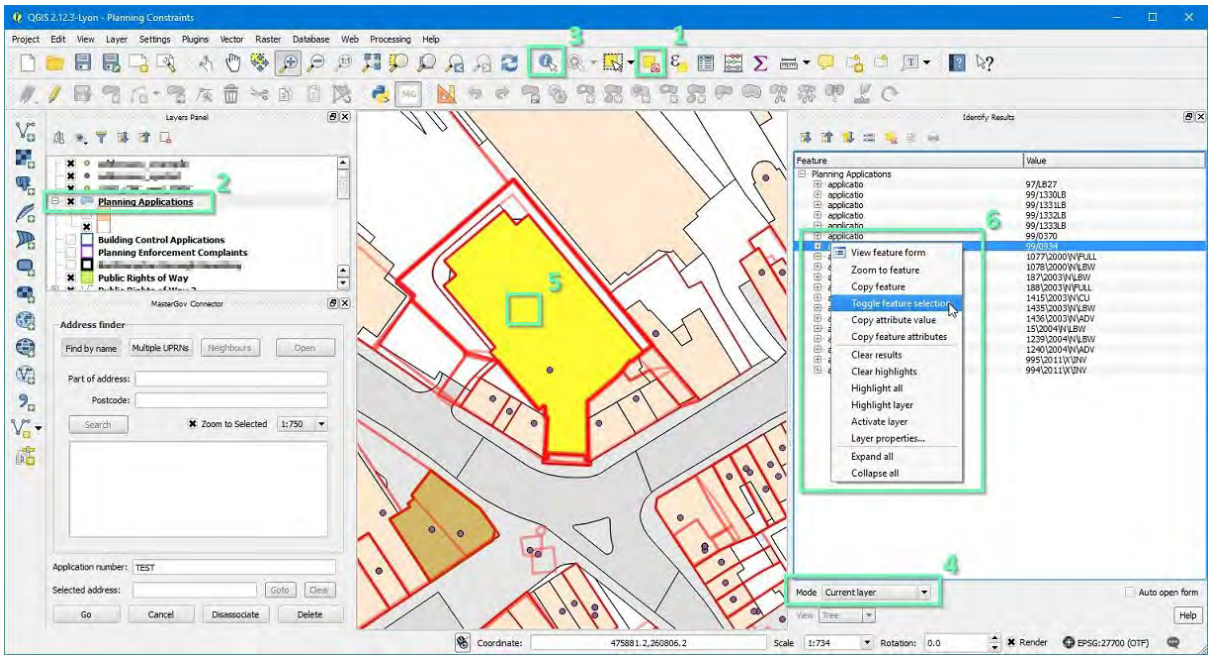
Auto loading of Competent Persons notifications

A Competent Persons batch import facility is included with the module. This facility allows the Council to store any number of Competent Persons XML files in a network folder and then import them in a batch. The system reads the XML files one at a time, ascertains the application type from the scheme name and then imports the case.

The user is informed of the progress during the import and is provided with a summary when the import is complete. During the process records are matched against the Gazetteer and anything that is erroneous is flagged and returned to the sender via an automatically generated email.

GIS Integration

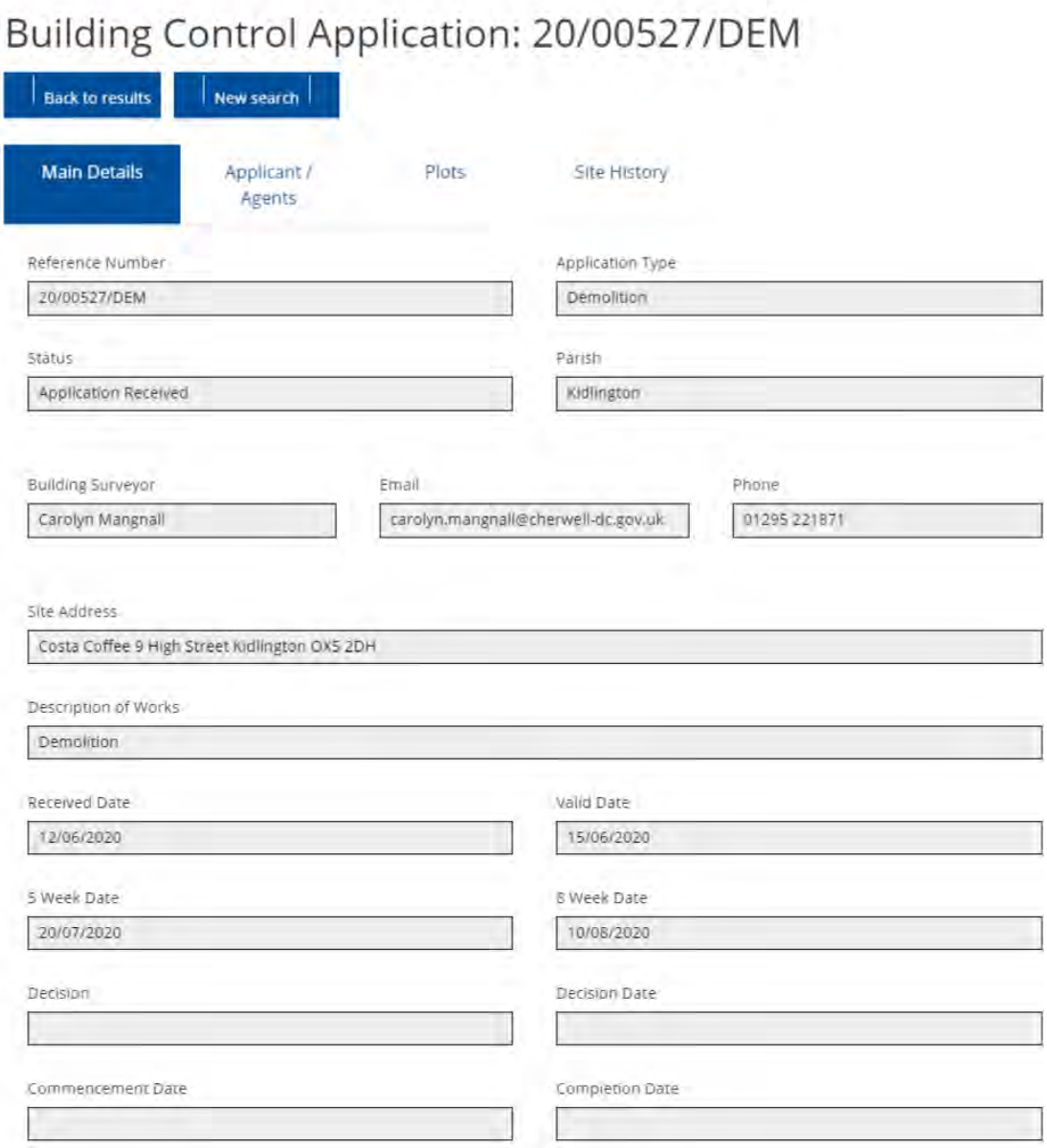
In addition to the general GIS information referred to later in the document MasterGov utilises spatial elements to obtain lists of constraints such as Radon, Listed Buildings and Brine etc. as well as parishes, wards, the area of red line, coordinates of the plot and a UPRN(s) if applicable. These are all automatically returned back to the Building Control module once the case has been digitised in the GIS link. Furthermore, lists if neighbouring properties can also be returned from the GIS connector to make creating neighbour letters for demolition quick and easy.



Public web interface

The Building Control module benefits from an online public facing register system and a consultation portal which is accessed using a consultee login. This real time system enables members of the public to search and view planning applications and download associated documents. In addition consultees can log in, view extra information and submit their representations which are automatically written to the back office database with an email notification being sent to a nominated mailbox.

All transactions are carried out in real time with no requirement for scheduled exports to the web or replicated databases. Any representations submitted are automatically written to the case in question without the need for a user to input the data. Upon receipt of a representation the case officer or other recipient can be sent a notification. Representations can also be accompanied by associated documents.



All web pages conform to Level AA of the W3C Web Content Accessibility Guidelines 2.0. Pages are also skinned to match the Council's existing website look and feel. If an existing content management system is employed by the Council DEF can even harvest a master page for the site.

As of September 2018 all DEF produced websites are fully compliant with the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018.

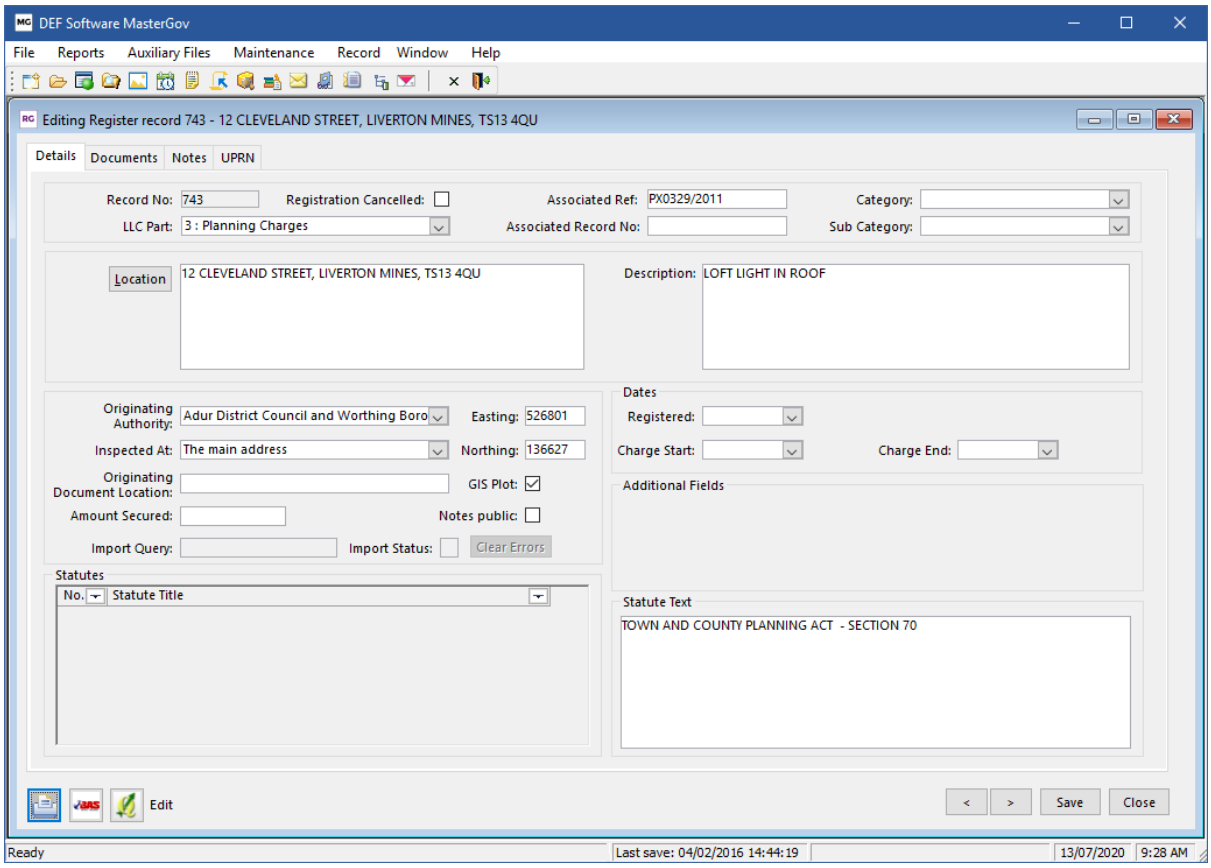
Land Charges

DEF Software's Land Charges module is a modern solution for handling LLC1 and CON29 searches. Although designed to work spatially in an automated fashion, the solution can work with data in database tables too.

The solution was written to allow maximum flexibility of question answering with each question being able to be answered using GIS, GIS with database, database only or manually. Given that each question can have multiple answer sources it is possible to answer a question from multiple sources. This can be very useful where historic data is stored differently than current data.

Land Charges register management

The system is supplied with a separate Local Land Charges (LLC) register. It is the repository of the 12 charge types as legislated in the Land Charges Act. For charges linked to Planning, Building Control and Enforcement, these are automatically loaded into the register from their respective modules. This includes metadata and the spatial element which is needed for HMLR.



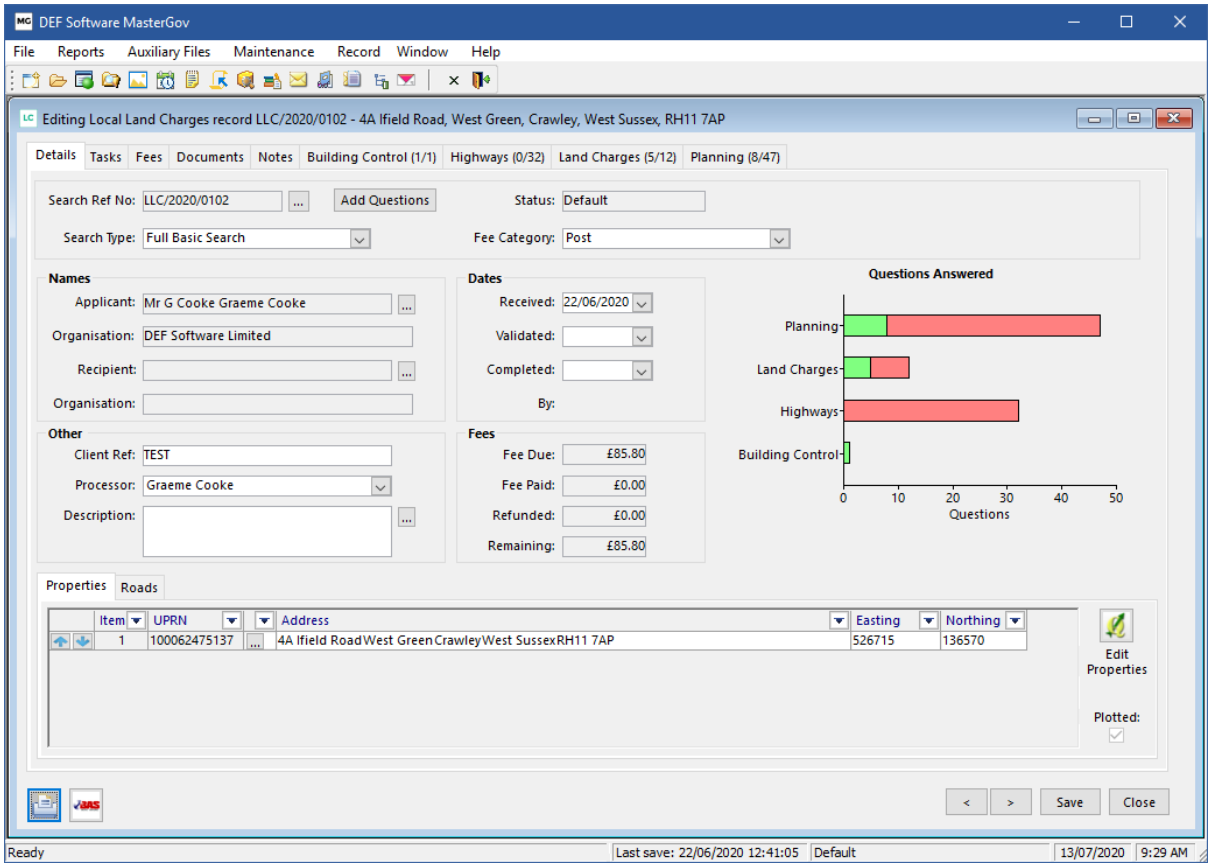
As with other modules in MasterGov the LLC register benefits from a full search facility which allows users to search for charges by number, address, charge type, charge sub type, registered date, start date and end date. Matching charges are displayed on a grid view where users can opt to open specific records.

In addition to the automatic import of charges, users with sufficient permissions can create new charges in system. The module allows for the storage of, but not limited to, the charge type, sub type,

UPRN, address, description, statute, reference number and key dates. Each charge can be digitised with the GIS connector.

Searches

The Land Charges module has been written to provide the Council the maximum flexibility for maintaining and completing searches. The system allows the Council to configure and maintain search questions with ease. Questions can be edited by users with suitable permissions meaning that if legislation changes the questions can be amended without the need to deploy a new version of the software.



Much of the power of the system is in the power to answer questions from a variety of sources. Answers sources can be:-

- GIS only – the answer is found with the attributes in the layer.
- GIS and database – a key piece of data is found in the layer but then used to search for additional data in a database.
- Database only – A UPRN is used to search a database without the use of GIS.
- Manual input – The question is answered manually.

When the system is configured, each question is assigned an answer source so that when the search is digitised any questions that use GIS will be automatically answered. Furthermore the UPRN from the plot is then used to auto answer the database only questions. The aim for the Council is to have as many questions auto answered as possible.

Out of the box, the system is prefilled with question sets for CON29R, CON29O and LLC yet the Council can add further questions sets. Questions are linked to departments which allows different

teams to login and answer only their own questions. Users are maintained in the system and each one is allocated to one or more departments.

The system has a complete fee configurator built-in which allows the Council to set fees for different search types and also for different delivery mediums. As such the Councils can set different fees for NLIS than postal searches. Optionally the Council can charge additional fees for optional questions and the system will automatically calculate these fees when the question is added. Finally fees are set against date ranges so the Council can enter fees in advance of them becoming active and the system will switch to them at the appropriate time.

HM Land Registry

Working with HMLR, DEF have developed an integration between the DEF LLC Register module and HMLR's API. The automated system updates HMLR on a brightly basis and update the LLC record in the system with the required HMLR references.

In addition, DEF have a suite of readiness reports to help authorities yet to go live with HMLR, understand any issues with their data.

NLIS

The Land Charges module is supplied with an integrated NLIS level 3 automated connector. A dashboard view within the system clearly displays the current position regarding NLIS searches to users.

LLC Searches Portal

DEF Software have also developed a search portal to allow the Council to receive searches electronically without the need for NLIS. This solution uses many of the key concepts of NLIS including a messaging option to facilitate two-way communication and a fully integrated connector.

DEF's LLC Searches portal differs however from NLIS in that the solution does not incur a per search surcharge and that all background information required is read, in real time, from the back-office Land Charges system.

The LLC Searches portal also has a facility to allow stakeholders outside the authority, or indeed those without access to MasterGov, to be able to search answer questions via a web interface. This is particularly useful for District authorities having County Highways answer the CON29 Highways questions. Another use case would be authorities that overlap a National Park and need some Planning questions answering by the National Park. The system further assists in this use case by allowing the answering department to be set from a GIS.

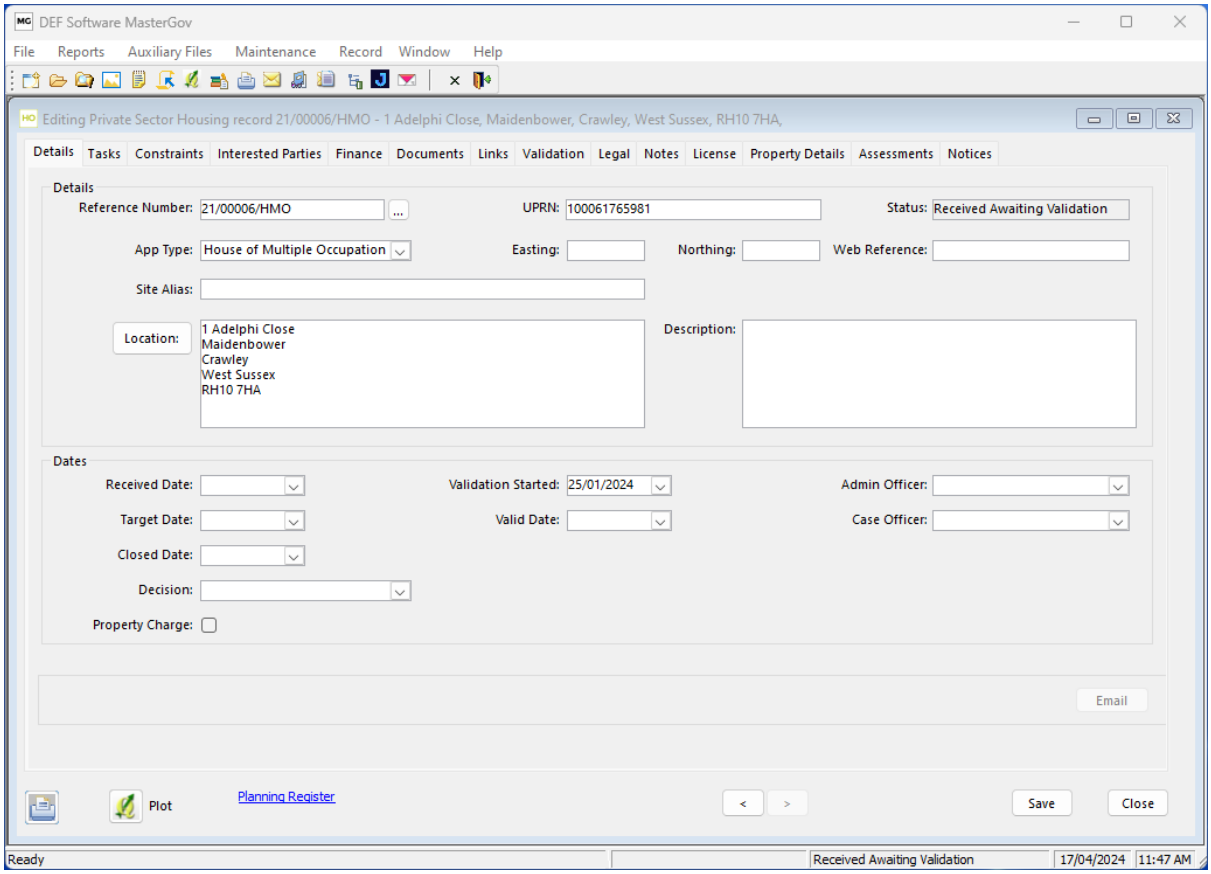
Like the NLIS interface, a dashboard of searches and message received is shown to users, so it is easy to see when new content has been received in back office.

GIS Integration

The GIS connector is used intrinsically by Land Charges to allow the user to digitise the property and highway connected to the search and then find answers to questions on intersected layers. The selected UPRN is returned to the module to allow database only questions to be answered automatically and a list of streets affected by the highway polygon will be returned from the NSG layer.

Housing (Private Sector)

The MasterGov Private Sector Housing module is and 'end to end' solution for managing the life cycle of a number of housing case record types including affordable housing, caravan licensing, disabled facilities grants, houses of multiple occupation, housing intervention, social lettings agency and empty homes.



Administer applications

Applications can be entered manually or imported via an API linked to a Council authored e-form. All case types relating to private sector houses can be entered. The system uses specific case types to render the tabs of the system to ensure they are pertinent to the case type be edited.

The system allows users to manage interested parties, property details, assessments, work details, site details, SLA details and notices. The grid below shows which feature are available to which case types.

Tab	Affordable Housing	Caravan Licensing	Disabled Facilities Grants	House of Multiple Occupation	Housing Intervention / Empty Homes	Social Lettings Agency
Phases & Dwellings	X					
Applications	X					
Licenses		X		X		
Property Details				X	X	X
Assessments				X	X	X
Work Details			X			
Site Details		X				
SLA Details						X
Notices		X		X	X	

The system also benefits from Housing Health and Safety Rating System (HHSRS) functionality which allows users to enter hazards against property types which the module uses to show the national average for classes 1 to 4. The system is supplied with the national data loaded.

Application Response

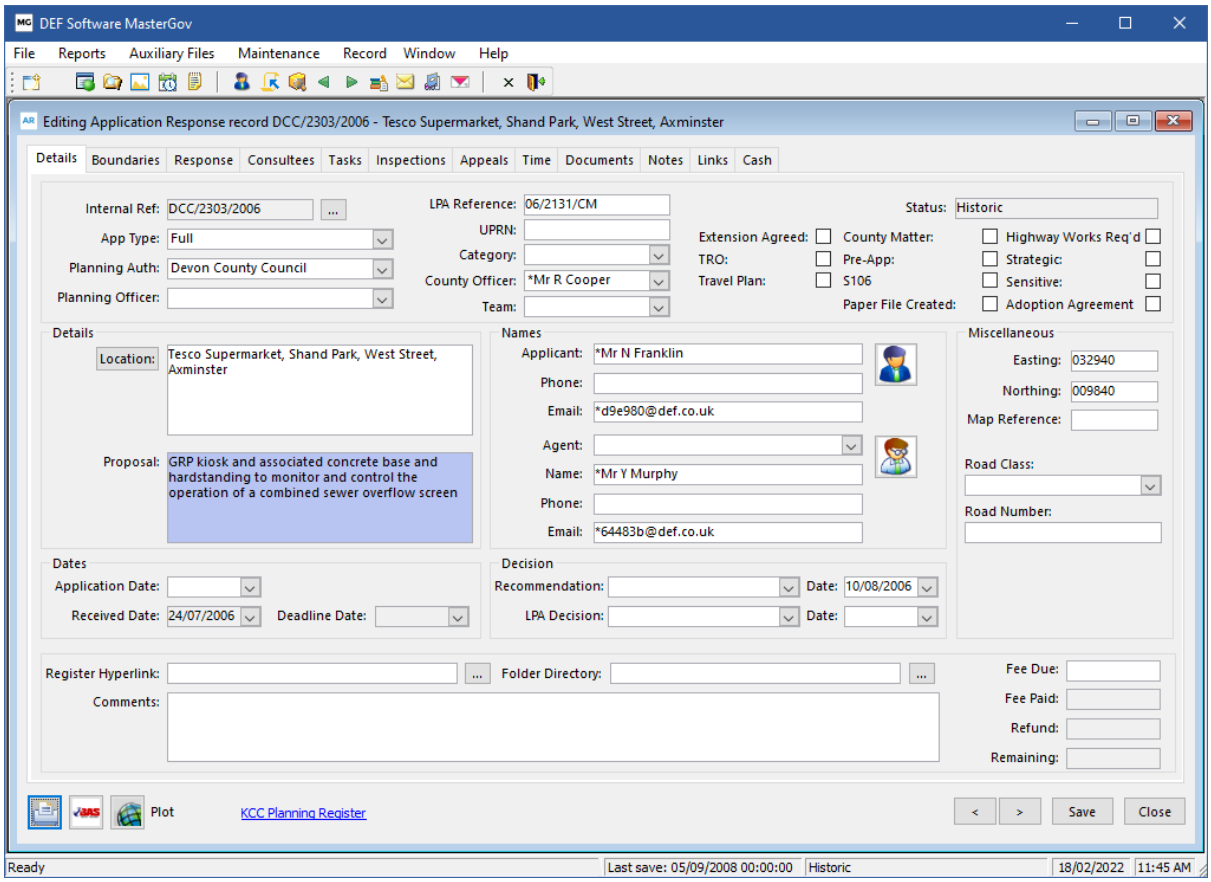
DEF Software's Application Response was originally designed to allow Highways Development Control officers to register, recommend and respond to District and Brough Councils Planning applications. These can be pre-application, outline or indeed any type of Planning application. The module does have a specific flag to denote pre-application so that it can be used for searching and reporting. Once deployed it quickly picked up a strong user base and was soon expanded to other County stakeholders that made representations to Planning applications. The module currently has specialist functionality for Highways, Education, Drainage and Archaeology although it can be used by any consultee department with the standard functionality.

Total Control of Consultation Responses

The Application Response module is separate from Planning and contains everything needed to make a consultation response back to a Planning application. Used by District, Unitary or County Councils, the module manages the full lifecycle from receipt of the consultation right through the electronic return of the response and any Appeal that may result. When used by a District or Unitary, the system will automatically create a case record in the module as part of the Planning consultation process.

The module holds all the key data related to a Planning application including a hyperlink to the authorities planning register which, when clicked, will load the application directly in the user's browser. The module calculates the deadline date and records the recommendation and the LPA's final decision. The module allows users to record the originating authority to allow for reporting and filtering.

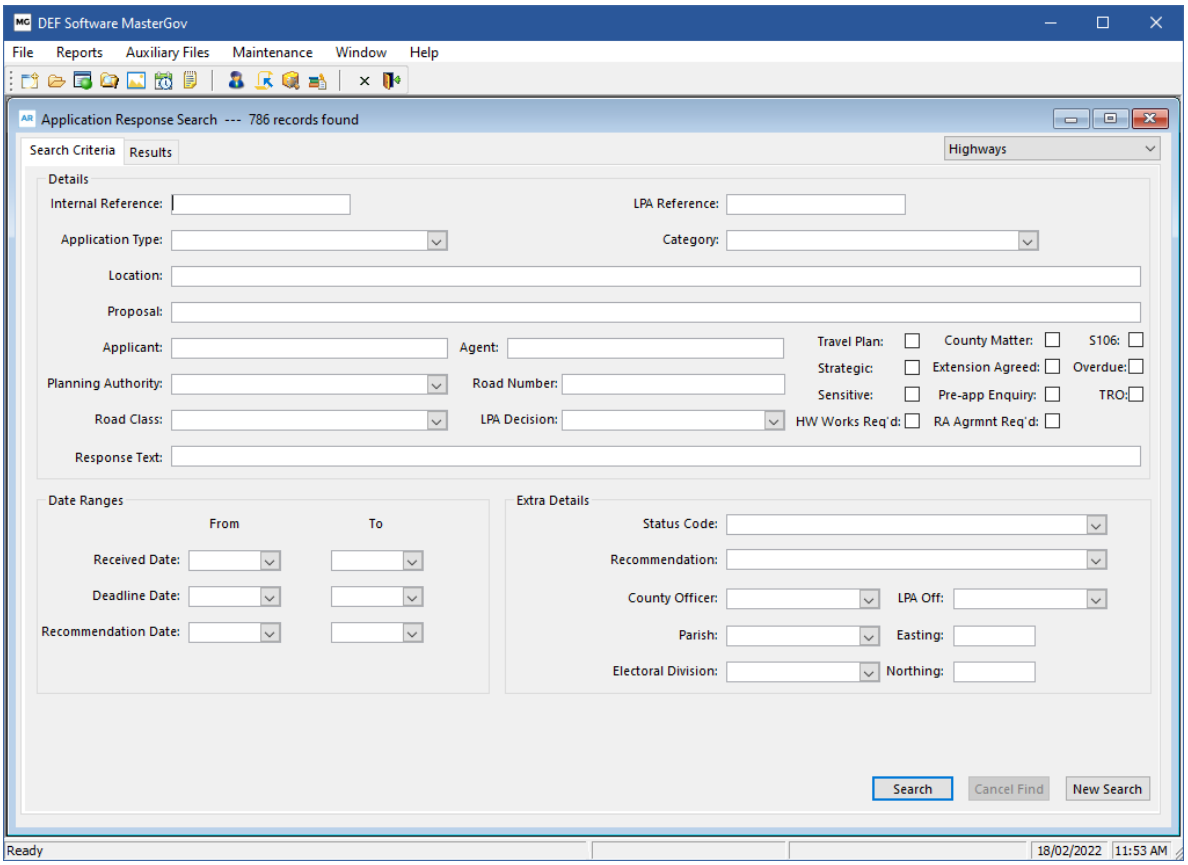
Within the module users can record multiple responses enabling an initial response of 'Additional information required' prior to the recording of a final response.



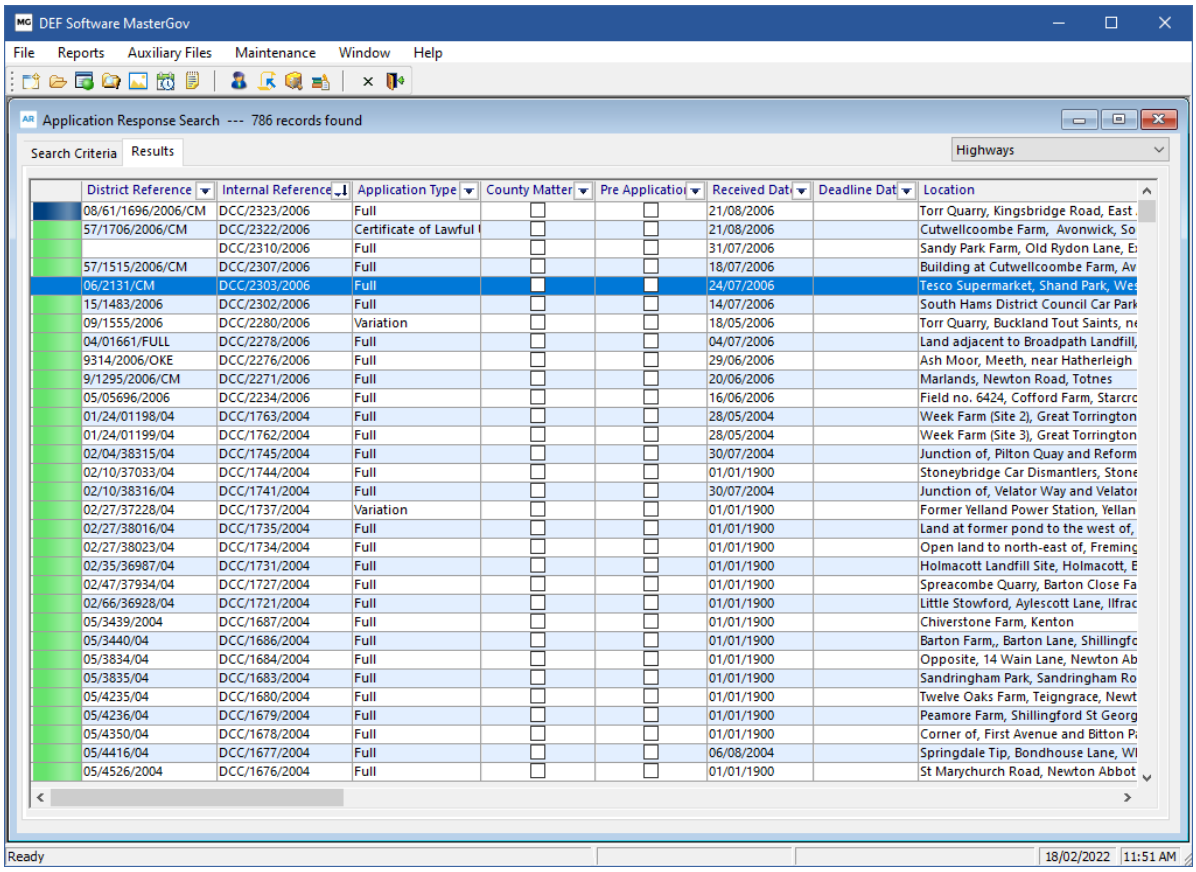
The module provides native support for multiple responses, secondary consultation, appeal recording and time sheet storage.

Searching

As with all modules in MasterGov, the planning module benefits from a twin tabbed search facility.



The first tab contains a plethora of search criteria with the results appearing on the second tab. Users can search using one or more of the criteria fields such as LPA reference number, applicant, agent, location, proposal, officer, key dates etc. In addition, depending on the department using the module there will be business area specific fields.



When a search is instigated, any matching records will be displayed in a grid view. Colour coding is applied to quickly show the user the status of the case.

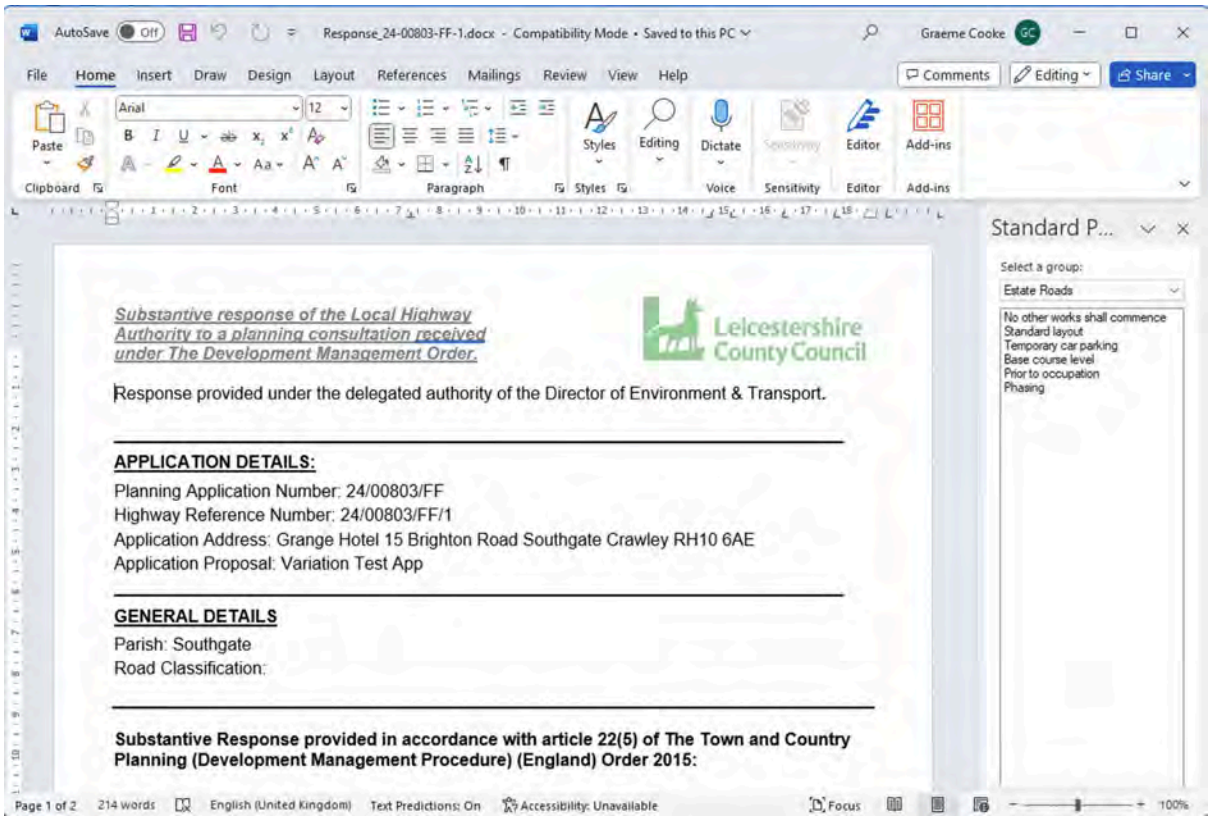
From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

Response Building

Users can compile their response directly in the module using Microsoft Word. Starting with a pre-defined standard template the system will merge key data before allowing the user to either type into the response or select standard conditions and paragraphs from a popup selector. Users can also email their responses directly from the system.

The system utilises Microsoft Word for building the response and comes with a Word plugin which allows users to select paragraphs, conditions, and standard text blocks from a pane in Word. This makes the construction of the response very simple.

The finished document can be emailed directly from the Responses tab or saved as PDF if required. Emailing the response will also prompt the user to choose a recommendation. Once selected this update the main details tab.



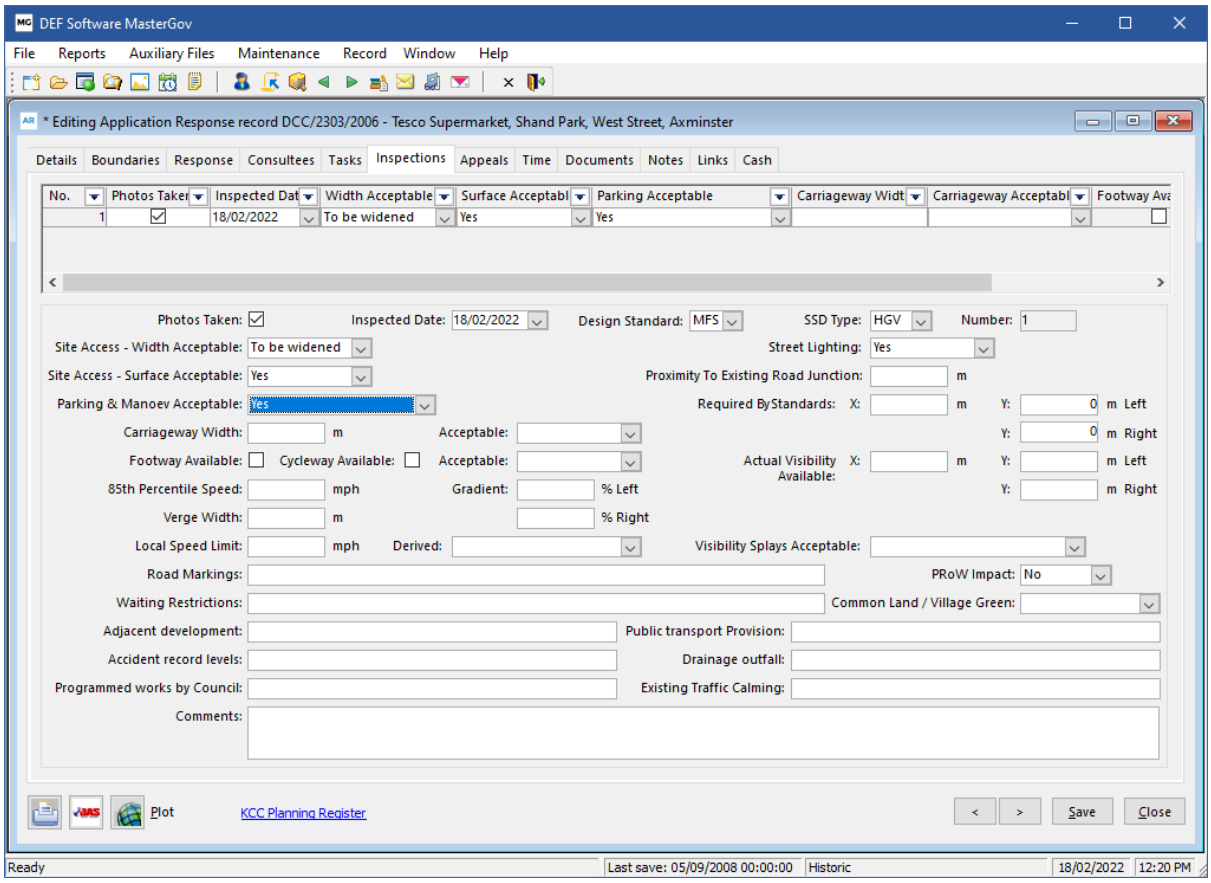
Highway, Drainage, Education, Ecology and Other Specialisms

As stated, the Application Response module has been designed to be used by multiple business teams albeit in a data silo. That is to say that each teams' records are separated from the others. In affect the module appears to be specific to each team. It is however possible to be a member of multiple teams and able to see more than one teams records.

Regardless of department using the module all users get tabs for main details, responses, secondary consultation, workflow tasks, appeals, time sheeting, document management, notes, case links and fees.

Certain departments get additional tabs. Highways get a dedicated HDC inspection record. Drainage gets an environment tab with constraints and specific OWC fields. Education gets a school's tab with information about schools, places, and capacities. Ecology has a replication of the biodiversity net gain screens as seen in Planning.

In addition, the details screens for each specialism are tweaked to better reflect the requirement. For example, Drainage get vulnerability class, high / low categorisation and flood risk percentage.


DEF Software MasterGov
File Reports Auxiliary Files Maintenance Record Window Help
* Editing Application Response record DCC/2303/2006 - Tesco Supermarket, Shand Park, West Street, Axminster
Details Boundaries Response Consultees Tasks Inspections Appeals Time Documents Notes Links Cash
No. Photos Taker Inspected Dat Width Acceptable Surface Acceptabl Parking Acceptable Carriageway Widt Carriageway Acceptabl Footway Ava
1 18/02/2022 To be widened Yes Yes
Photos Taken:
Inspected Date: 18/02/2022
Design Standard: MFS
SSD Type: HGV
Number: 1
Site Access - Width Acceptable: To be widened
Street Lighting: Yes
Site Access - Surface Acceptable: Yes
Proximity To Existing Road Junction:
Parking & Manoev Acceptable: Yes
Required By Standards:
Carriageway Width:
Acceptable:
Footway Available:
Cycleway Available:
Actual Visibility Available:
85th Percentile Speed:
Gradient:
% Left
% Right
Verge Width:
Local Speed Limit:
Derived:
Visibility Splays Acceptable:
Road Markings:
PRoW Impact: No
Waiting Restrictions:
Common Land / Village Green:
Adjacent development:
Public transport Provision:
Accident record levels:
Drainage outfall:
Programmed works by Council:
Existing Traffic Calming:
Comments:
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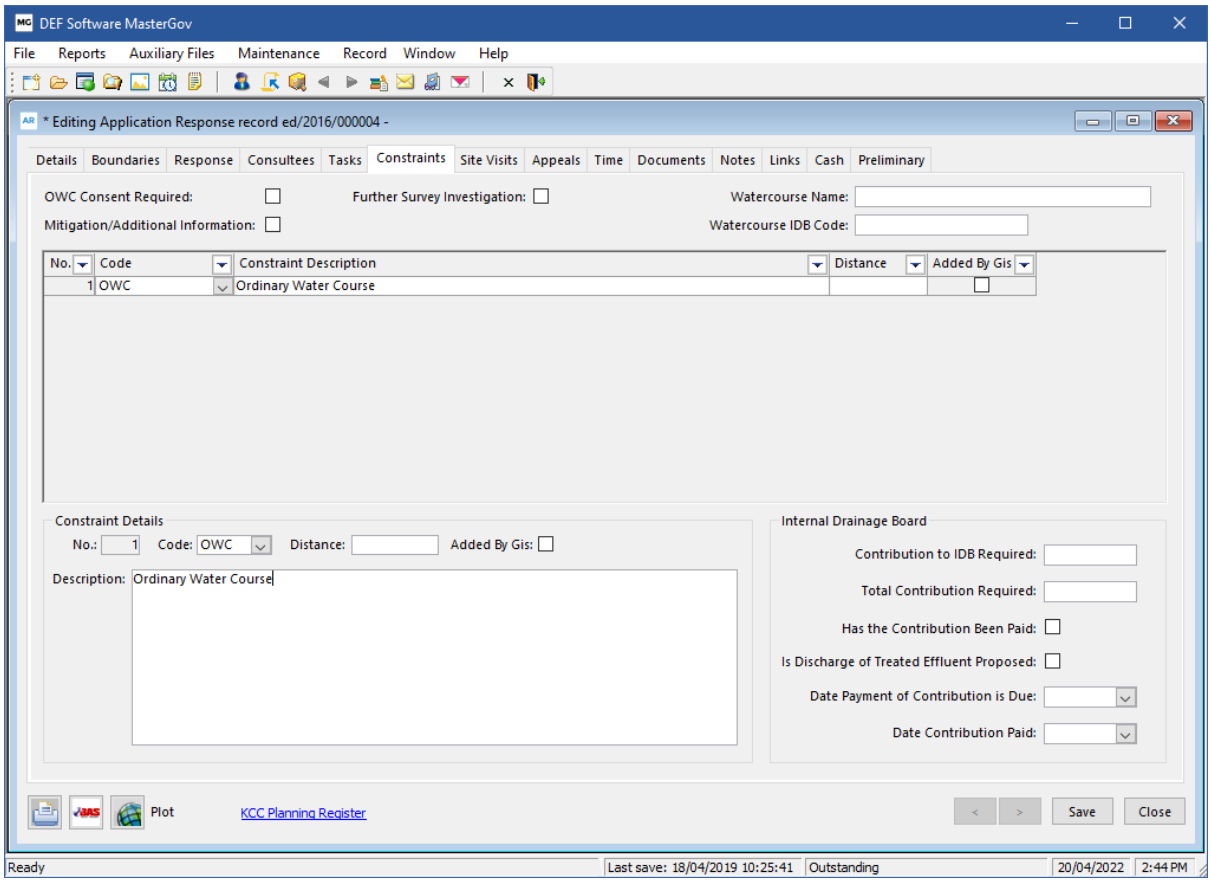
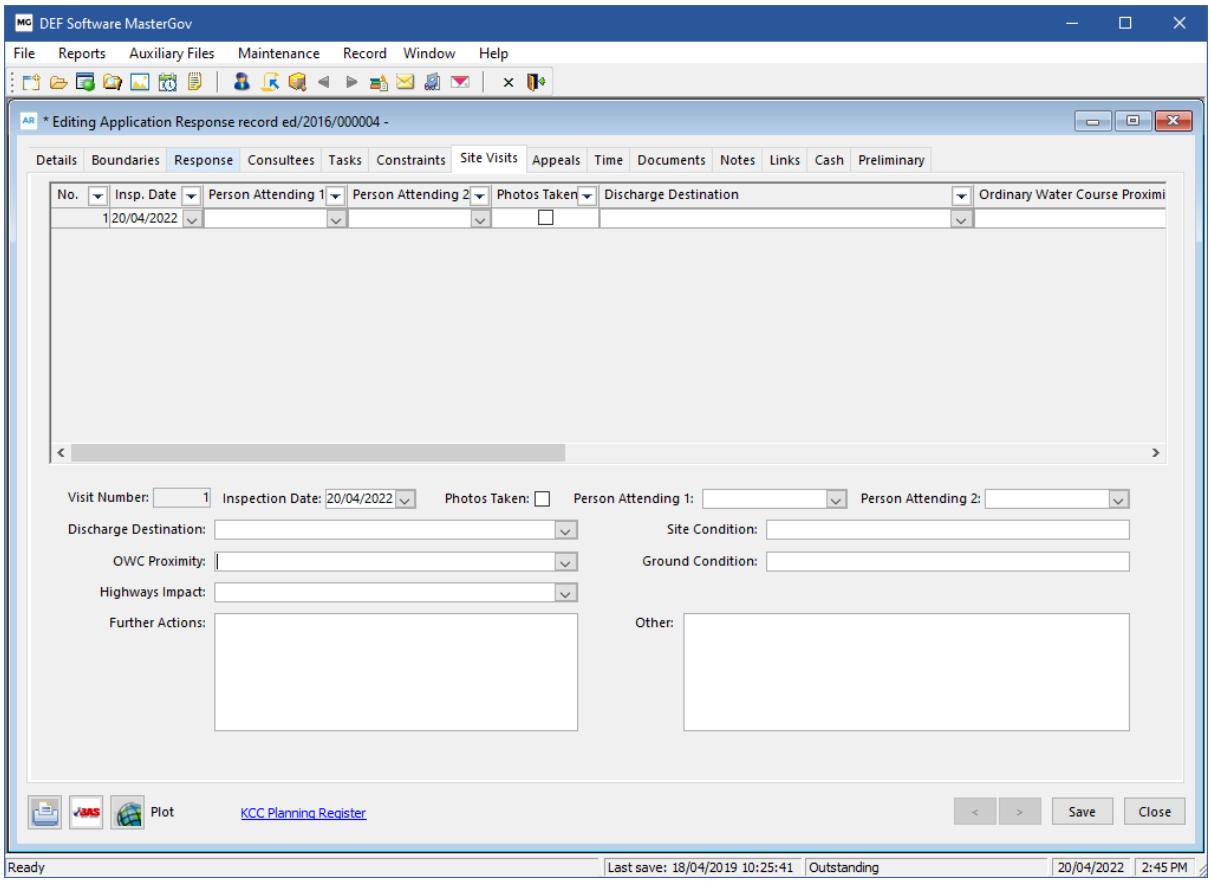
Save
Close
Ready
Last save: 05/09/2008 00:00:00
Historic
18/02/2022
12:20 PM


DEF Software MasterGov
File Reports Auxiliary Files Maintenance Record Window Help
* Editing Application Response record ed/2016/000004 -
Details Boundaries Response Consultees Tasks Constraints Site Visits Appeals Time Documents Notes Links Cash Preliminary
OWC Consent Required:
Further Survey Investigation:
Watercourse Name:
Mitigation/Additional Information:
Watercourse IDB Code:
No. Code Constraint Description Distance Added By Gis
1 OWC Ordinary Water Course
Constraint Details
No.: 1
Code: OWC
Distance:
Added By Gis:
Description: Ordinary Water Course
Internal Drainage Board
Contribution to IDB Required:
Total Contribution Required:
Has the Contribution Been Paid:
Is Discharge of Treated Effluent Proposed:
Date Payment of Contribution is Due:
Date Contribution Paid:
Plot
KCC Planning Register
Save
Close
Ready
Last save: 18/04/2019 10:25:41
Outstanding
20/04/2022
2:44 PM



Integration with S106

The module has been designed to work smoothly with the Legal Agreements to allow the recording of early negotiations at the response phase which can then be transferred automatically into the S106 record later.

Integration with Travel Plans

The Travel Plans module has a direct integration with Application Response to allow Travel Plans to be linked directly to the originating planning applications and HDC response. When a Travel Plan record is linked to an Application Response case record some common data is copied along with the geometry related the planning case. If a subsequent Application Response record is linked to the Travel Plan record, the geometry is automatically extended to encompass the area of both planning applications.

Multi Department Versus Single Response

The module can be used on one of two modes which are as follows: -

Multiple Department

In this mode any number of departments can make a representation to a planning application. Each department manages this themselves and responds to the LPA directly. This ensures that each department controls the timescales and isn't adversely affected by another team being late with their input.

Single Response

The single response model is relatively new to Application Response and allows an authority to centrally receive a request for a consultation. This request is managed by a central business support team. During registration the system will create child response records for each team. When each department completes their response, they are sent back to the central business team to collate and send back to the LPA. Under this model the LPA only receives one combine County response.

The purpose of this model was to allow better control of S106 requests so that they could be managed corporately.

Road Adoption

The Road Adoption module was engineered from the ground up to meet the needs of managing section 38 and 278 agreements as well as advance payment code (APC) applications. From registration, through technical approval, bond calculation and the issuing of certificates the module allows Councils to manage the full life cycle of an agreement.

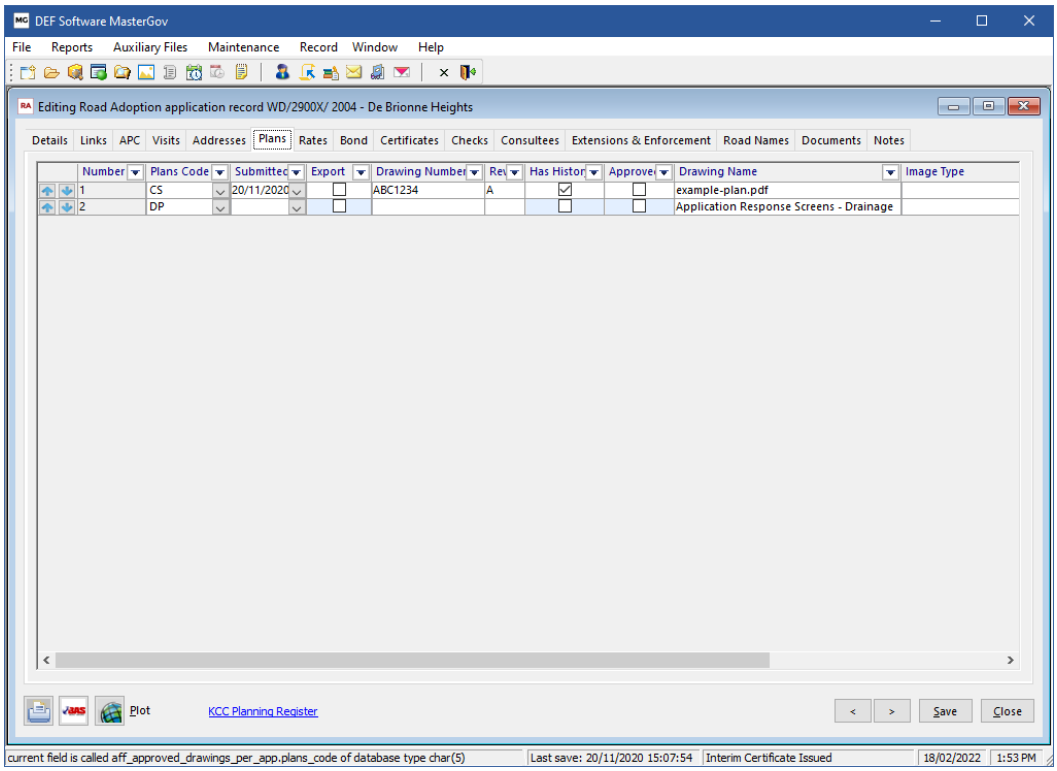
Agreement Administration

The module supports every facet of the agreement process. With GIS support, document management, workflow and the other MasterGov standard features the solution is a one stop shop for S28, S278 and APC agreements.

The module provides the following features:

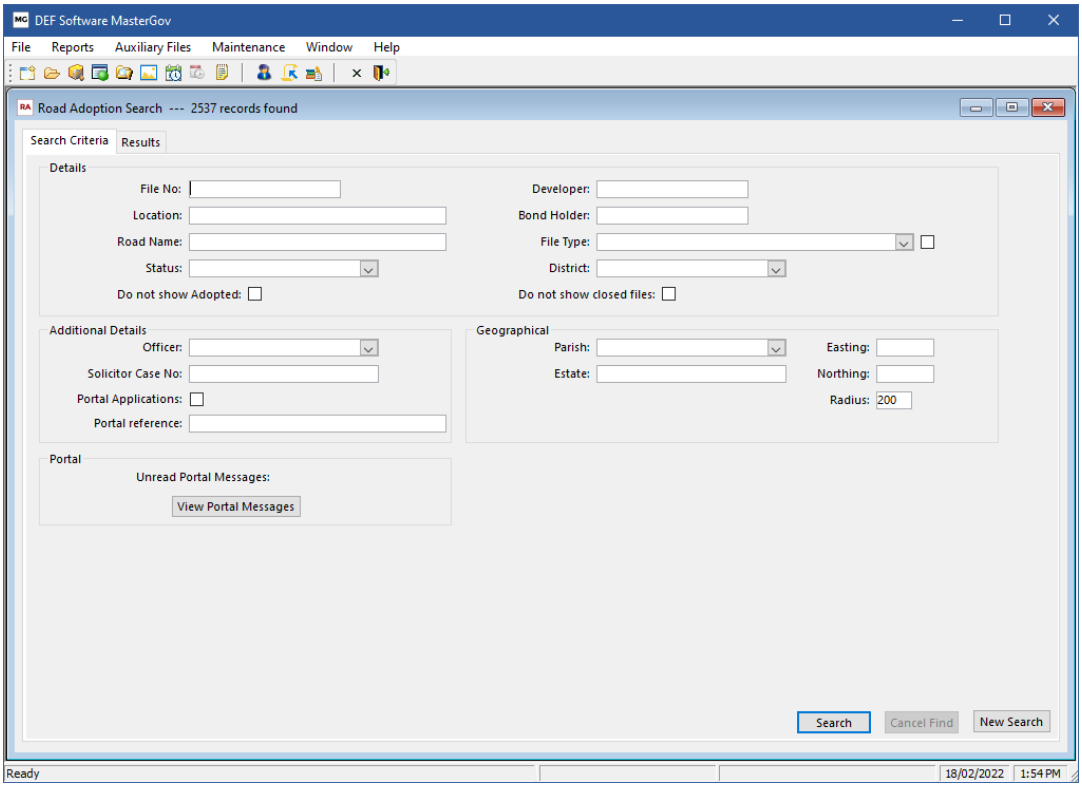
- Online Technical Approval submission integration
- Onsite visit diary
- Dedicated APC records (S220(1) and S220(4)) with prosecution and surety details
- Integrated address book for developer, agent, contactor, surveyor, solicitor, bond holder, landowner and designer
- Embedded plan management with supersede function
- Value of work calculator with rate picker
- Bond calculation with bond split calculation
- Certificate issuing with bond reduced calculation
- Check list for certificate issue
- Extension and enforcement recording
- Road name database
- LSG integration
- Built-in document management
- GIS integration

The module is in use at the majority of County councils in England and has been involved over time by input from authorities.

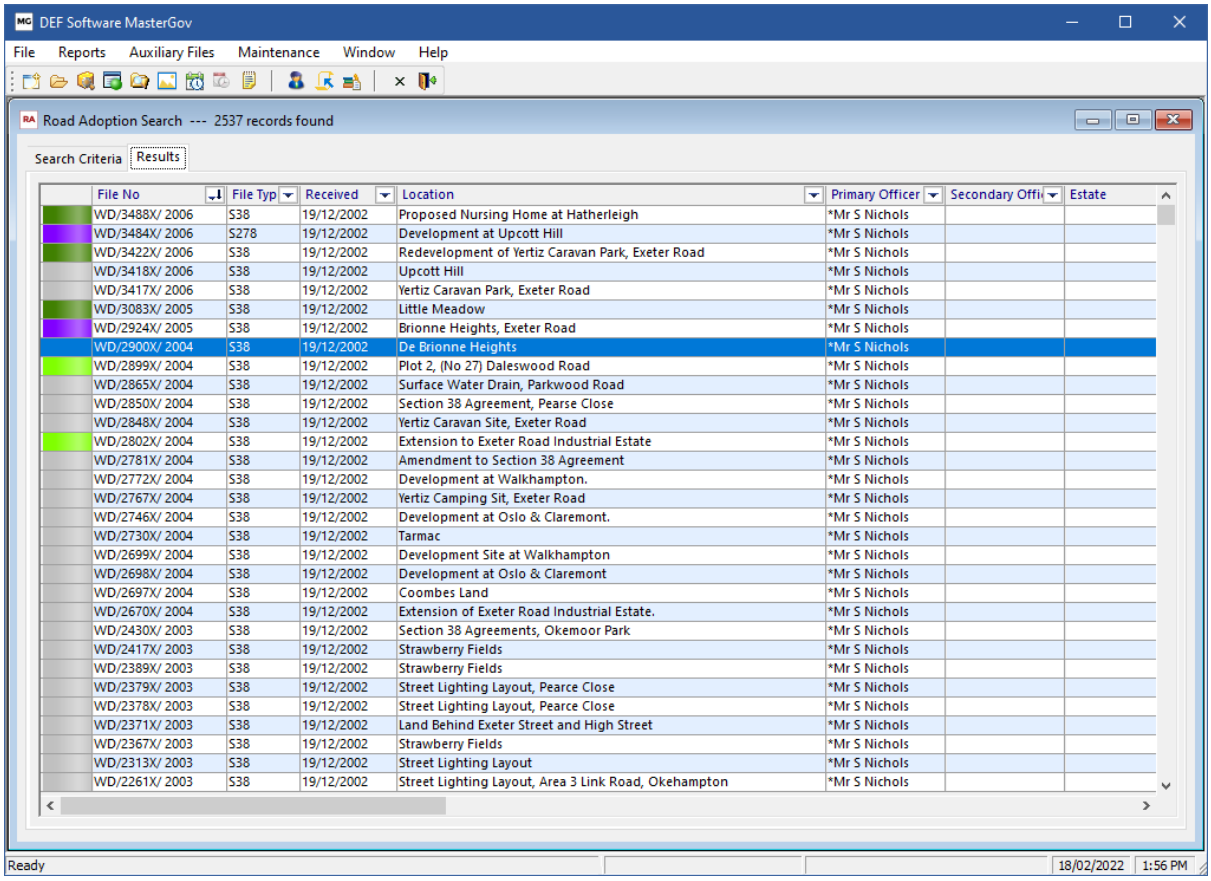


Searching

As with all modules in MasterGov, the Road Adoption module benefits from a twin tabbed search facility.



The first tab contains a plethora of search criteria with the results appearing on the second tab. Users can search using one or more of the criteria fields such as file number, file type, developer, bond holder, location, estate name, officer, key dates etc.



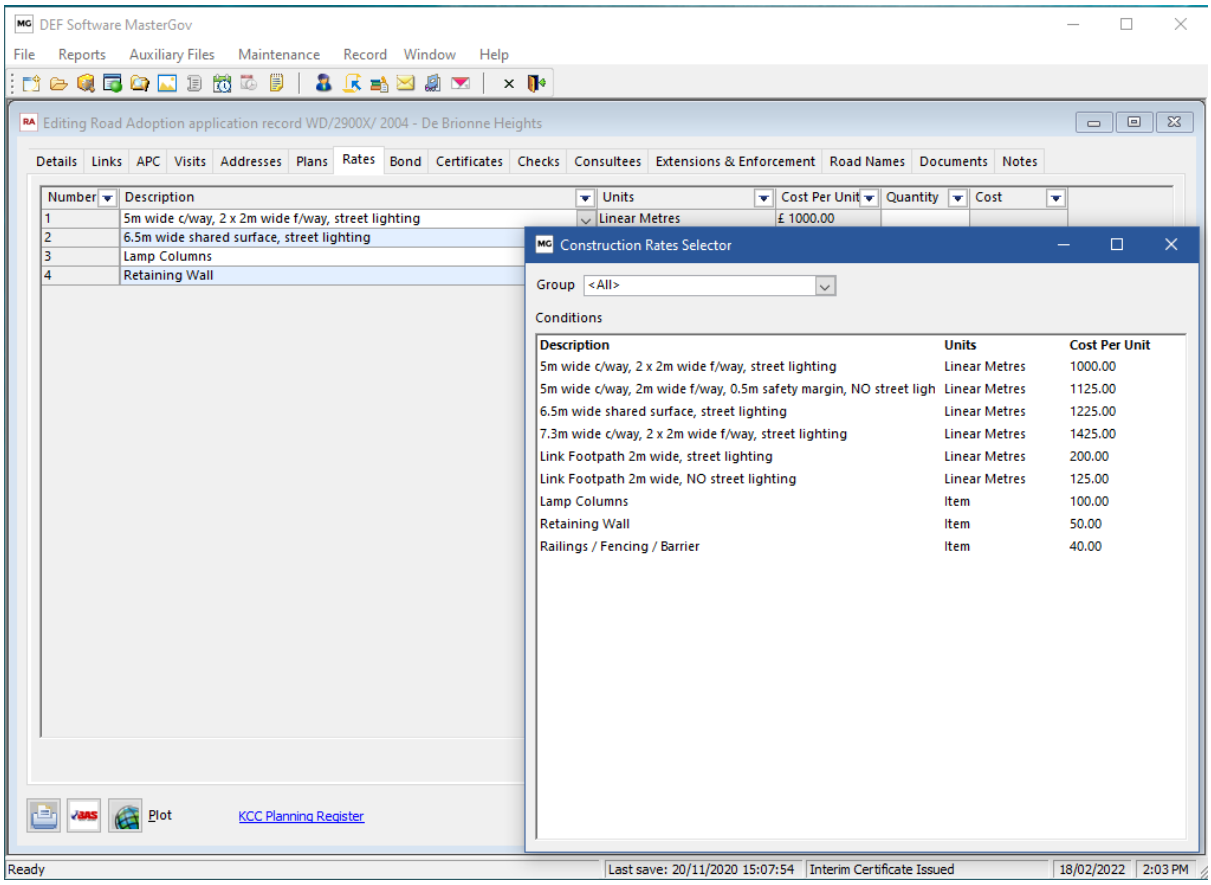
When a search is instigated, any matching records will be displayed in a grid view. Colour coding is applied to quickly show the user the status of the case.

From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

Value of works

The module has a Rates tab which allows users to build up a schedule of works using known construction rates which are defined by the authority. Users can simply drag and drop one or more rate items into the screen. They need only enter the quantity per item and the system will calculate the total value.

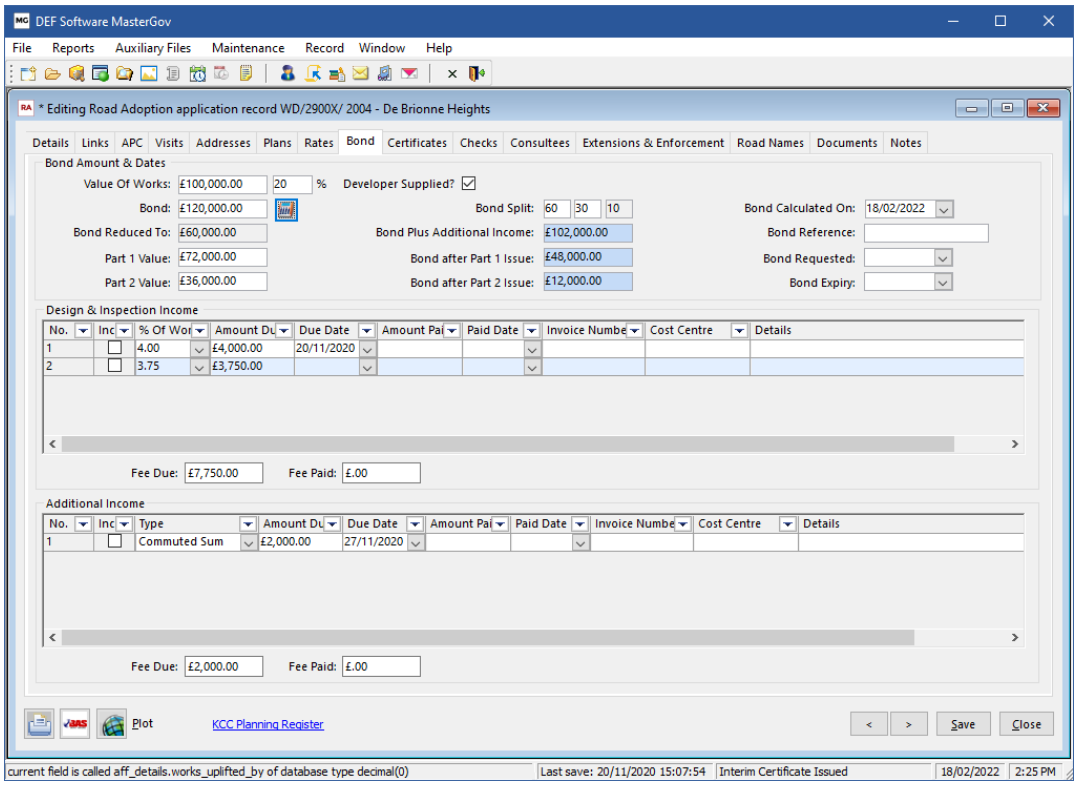
Adding to the construction rate list is simple and is done directly in the Road Adoption module.



Bond Calculation

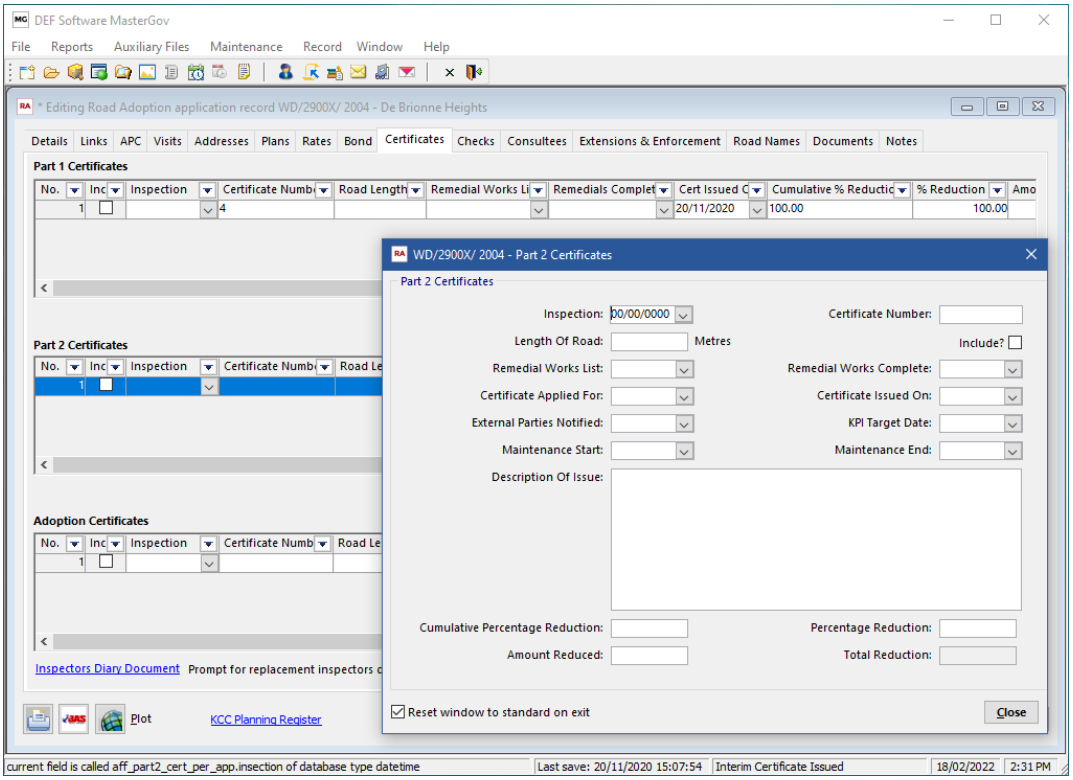
Once the value of works is calculated or a developer supplied value of works is entered the user can calculate the bond and bond split. The bond is calculated against the value of works with an optional contingency percentage taken into account. The bond calculated date is recorded and the user can enter the bond reference.

Entering the bond split percentages will result in the system calculating the part 1, part 2 and final adoptions values (S38) or interim and final (S278). These are displayed to the user and can be used in correspondence. In addition, the system allows users to record design and inspection as well as other additional income such as commuted sums. If the Council wish to use their own commuted sums calculation spreadsheet this can be uploaded the documents for quick access later.



Certificates

The module has a dedicated screen for managing certificate issuing. This will either be part 1, part 2 and adoption certificates for S38 or interim and final for S278.

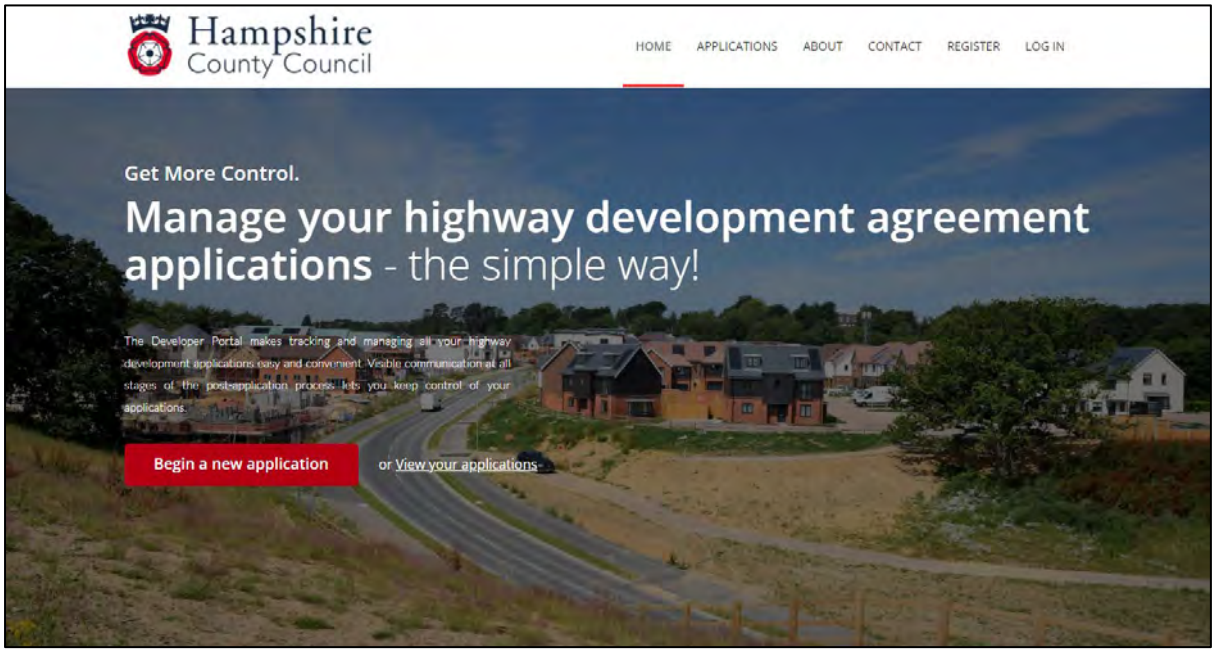


The certificates tab is broken down into either three grids for S38 or two for S278. The tab has been designed to show a spreadsheet style view with details views behind each grid. For example, with part 2 the detail view has fields such as maintenance start and end dates.

Developer Portal

DEF Software have created an online portal to allow developers and their associates to submit applications for technical approval. This portal can take online payments and allows developers to submit plans and other associated documentation.

The portal enables users to submit and track Highway Development Agreement applications (Section 278 and Section 38 applications) with the County Council. Using the portal enables communications and messages to be recorded in one location which is then accessible to all parties involved in the application. As the applicant you can invite other users (such as the developer or other consultants) to each individual application so that you can share the progress and we can all work collaboratively to progress the application promptly.



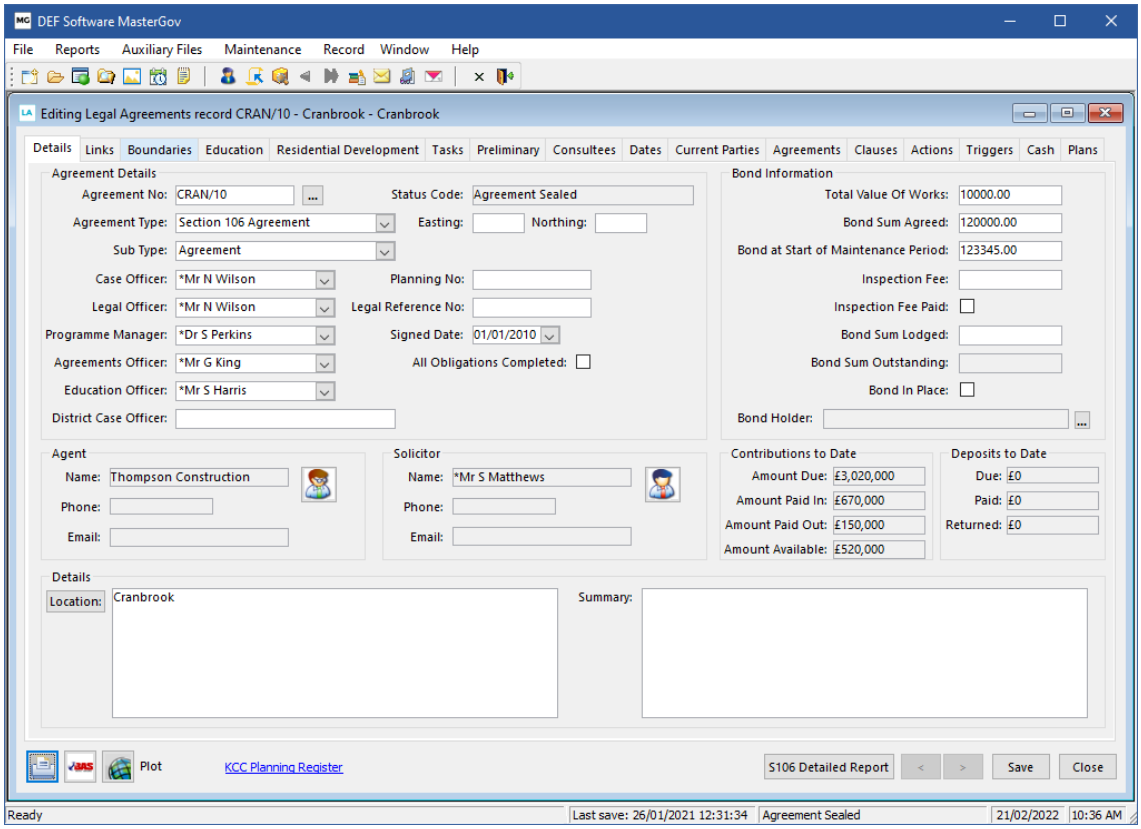
There is an integrated connector with MasterGov which downloads applications and documents directly into the database. This connector also enables a messaging tab in the Road Adoption module to allow external users to communicate with officers within the Council. This ensures that all communications are stored on the agreement and are easy to locate by any user.

Legal Agreements

The DEF Legal Agreements module was written as a direct response to authorities having difficulty managing their S106 agreements. The software has been specifically designed to manage pre-agreement discussions, record a completed or draft agreement and allow the authority to track each clause in respect of obligations and triggers. It is a true corporate solution to S106 with input from multiple business area supported. Collection of monies owed can be tracked efficiently and key dates for when money must be spent will be flagged. Any money collected for an agreement can be allocated to a particular project and reported on.

Agreement Life Cycle

The Legal Agreements module is a true one stop shop for S106 agreements and assists the authority in the full life cycle of an agreement. An agreement record can be created as early as the LPA response phase and certainly long before the agreement is drafted. Agreement records can be linked to Application Response records which in turn will copy forward the contributions requested.

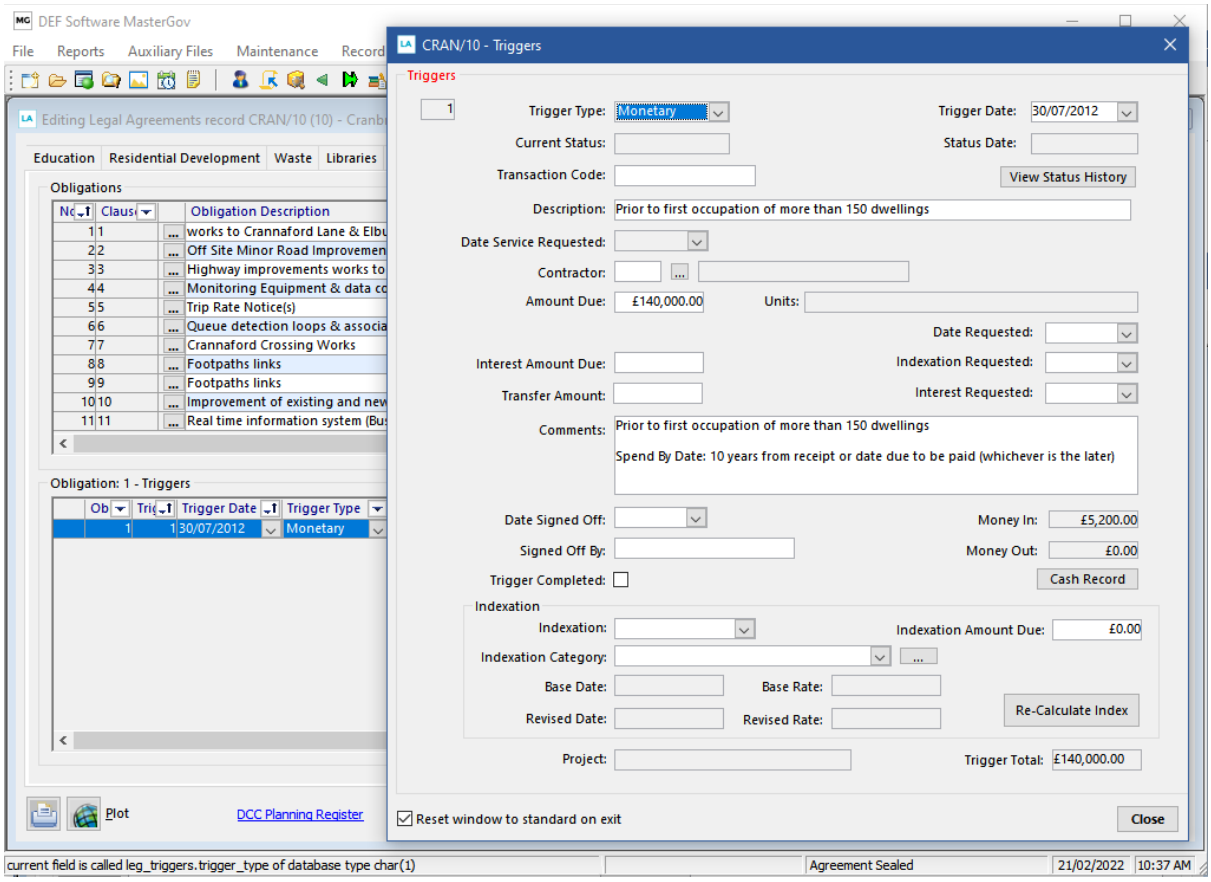


The module has many features. As summary of which can be seen below:

- Linked to Application Response to record contributions sought
- Record the main details of the agreement including type, sub type, solicitor and agreement summary
- Auto calculation of contributions to date and deposits to date on Details tab
- Automatic index calculations for BCIS and RPI
- Record multiple bond calculations
- Dedicated management of Education, Waste and Library requirements
- Residential development summary

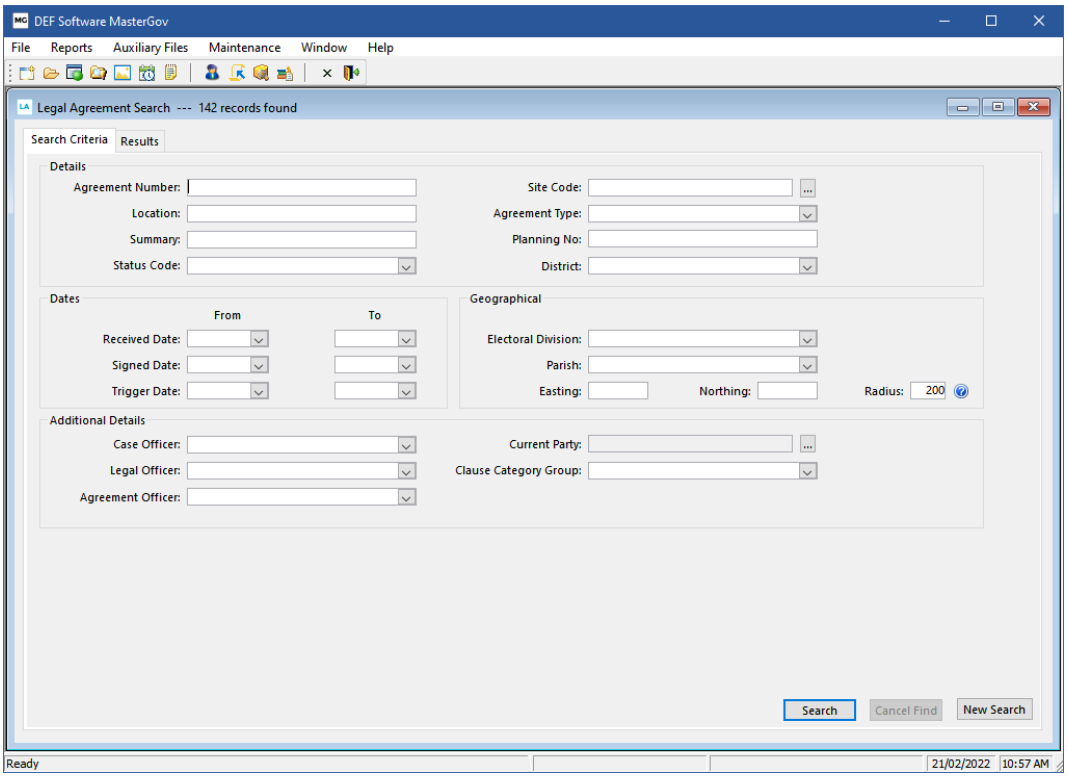
- Recording of pre-agreement correspondence and heads of terms
- Secondary consultation provision
- Ability to list all parties on an agreement
- Storage for agreements including any number of drafts, supplemental and variation
- Detailed list of clauses with monitoring details
- Obligations and associated triggers linked to clauses with ability to future load contribution triggers
- Record all financial transactions associated with an agreement with every entry linked to a trigger, obligation and clause
- Record spend by date against each contribution received
- Link to a DEF's Project Monitoring module or simply use the in-built project allocation for capital project management
- Store plans and associated documents directly on an agreement record

The Legal Agreement's module is in use at 17 of County authorities.

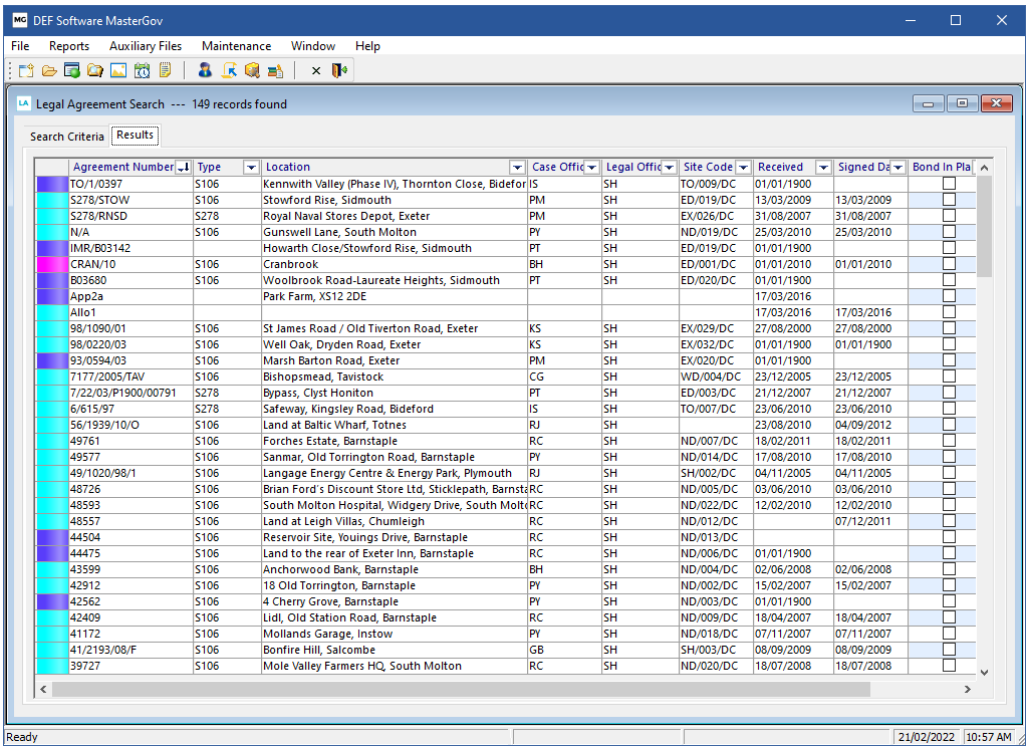


Searching

As with all modules in MasterGov, the Legal Agreements module benefits from a twin tabbed search facility.



The first tab contains a plethora of search criteria with the results appearing on the second tab. Users can search using one or more of the criteria fields such as agreement number, type, LPA reference, current party, location, summary, officers, key dates etc.



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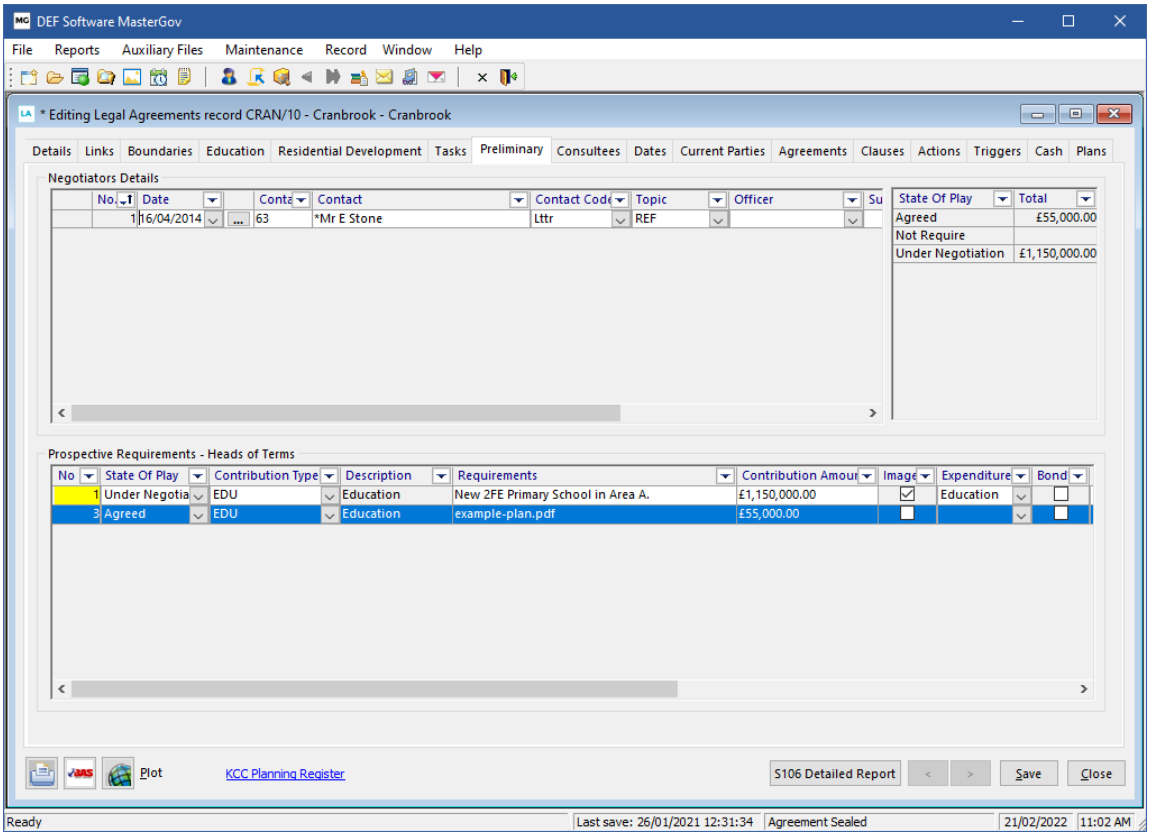
From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

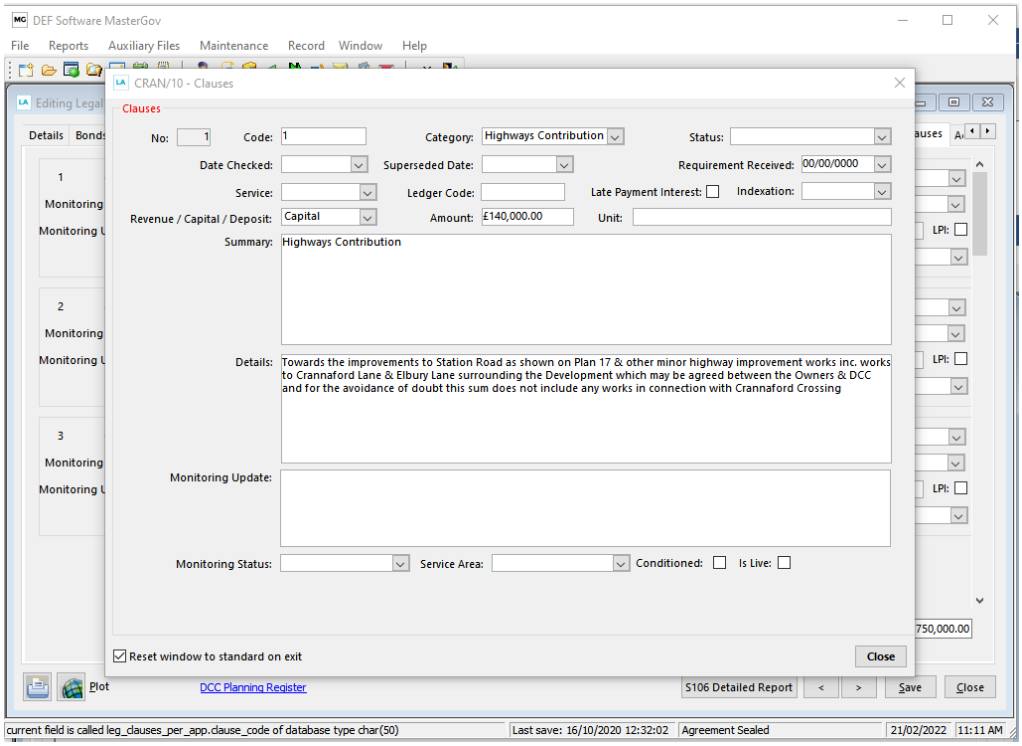
Pre-Agreement

Agreement records can be added before the agreement is in a draft form. In fact the agreement record can be created during the initial consultation phase. The system allows users to copy forward details of negotiations from Application Response so that they can be updated in Legal Agreements. This allows authorities to compare contributions sought versus contributions agreed.



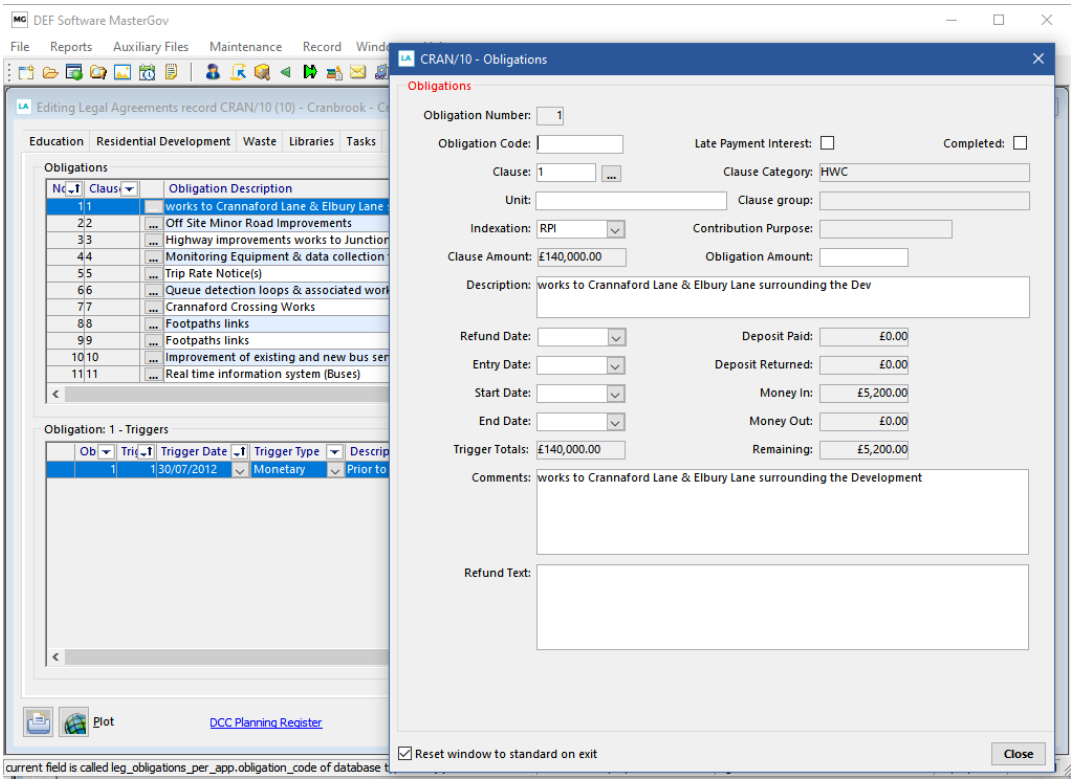
Clauses

The module allows the authority to record all the clauses of the agreement within the record. This will be the basis for linking obligations and triggers. Any number of clauses can be recorded along with the full detail of the clause, it status, key dates, financial value, indexation type, service area and monitoring status.



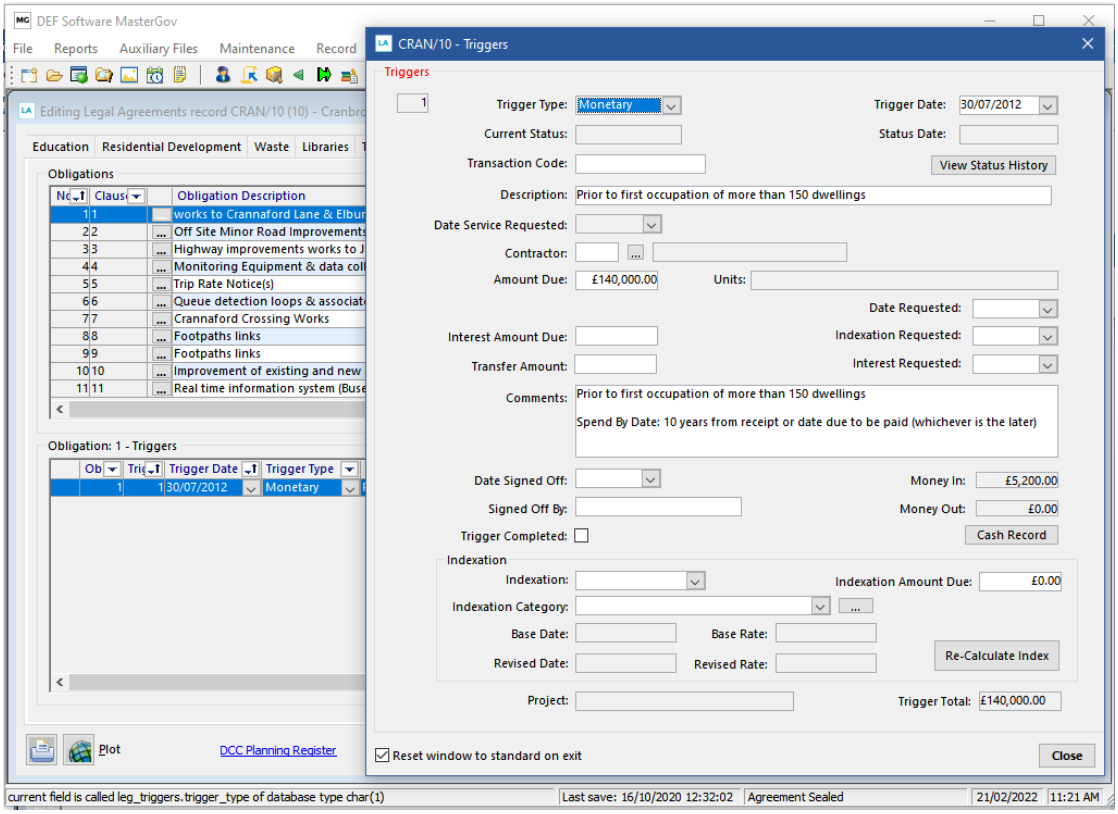
Obligations and Triggers

As stated, both obligations and triggers are a linked to Clauses. An obligation is linked to a Clause and a Trigger is linked to an Obligation. As such any trigger record is linked back to a Clause.

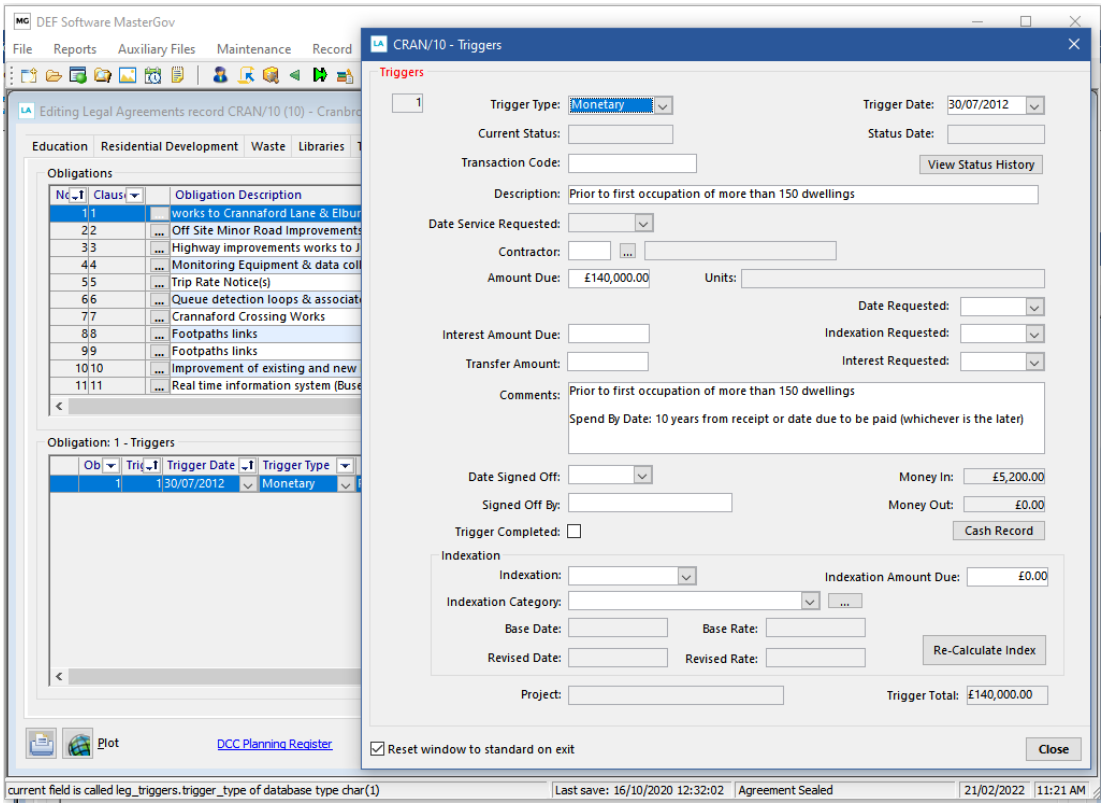


The obligation holds key information such as indexation, key dates and comments. The system keeps an automated total of monies in and out against the obligation as well as deposits paid or returned. When finished an obligation can be marked as complete. Any number of obligations can be recorded against a specific clause.

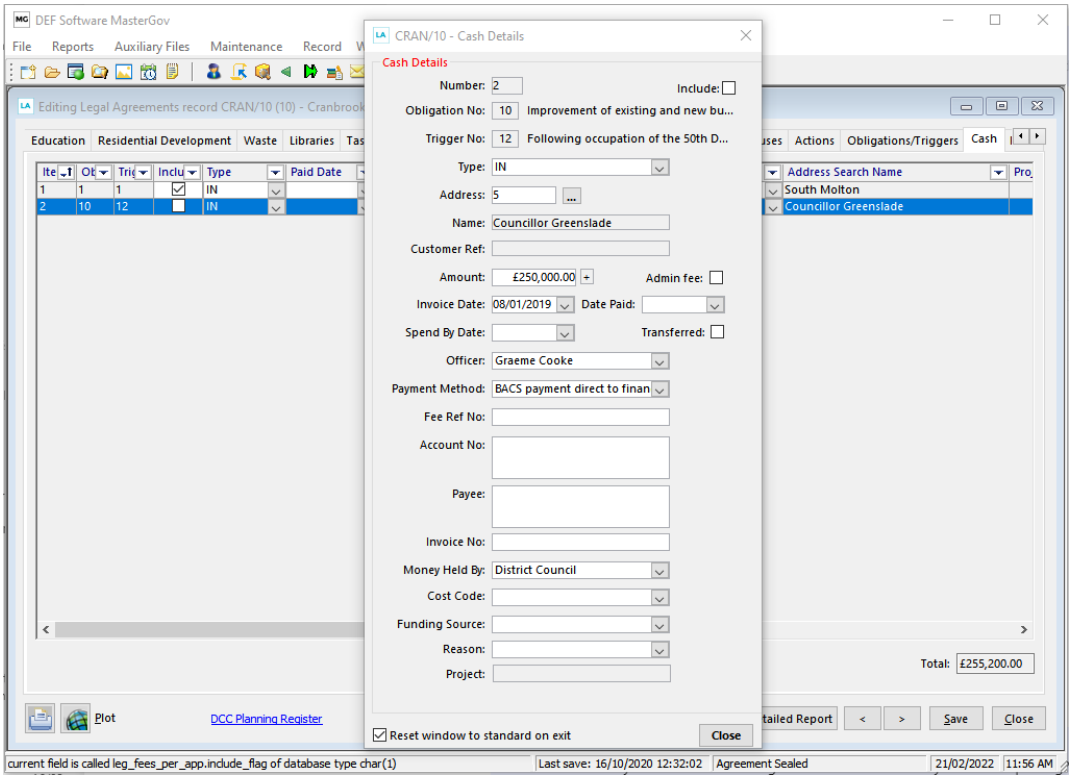
Each obligation can hold any number of trigger records. Triggers can be financial where monies have to be invoiced or spent for the agreement or service, service based such as a task performed by say the landowner or related to deposits paid or returned.



Triggers can be futured planned so that the system can be used to alert officers to upcoming triggers due or for financial forecasting reports. Trigger records hold financial details such as the contribution amount, late payment interest and auto calculated indexation.



Triggers are also directly linked to the financial transaction records. Any monies in or out of the agreement are therefore linked to an obligation and by association a clause. As such any financial transaction can be attributed to a specific business area or category. For example, a financial transaction can be recorded as primary education and by association, education.



Infrastructure Funding Statement

The Legal Agreements module has all of the required fields and reports to facilitate the infrastructure Funding Statement reporting requirements. The reports are provided, in SSRS format, with the system.

Travel Plans

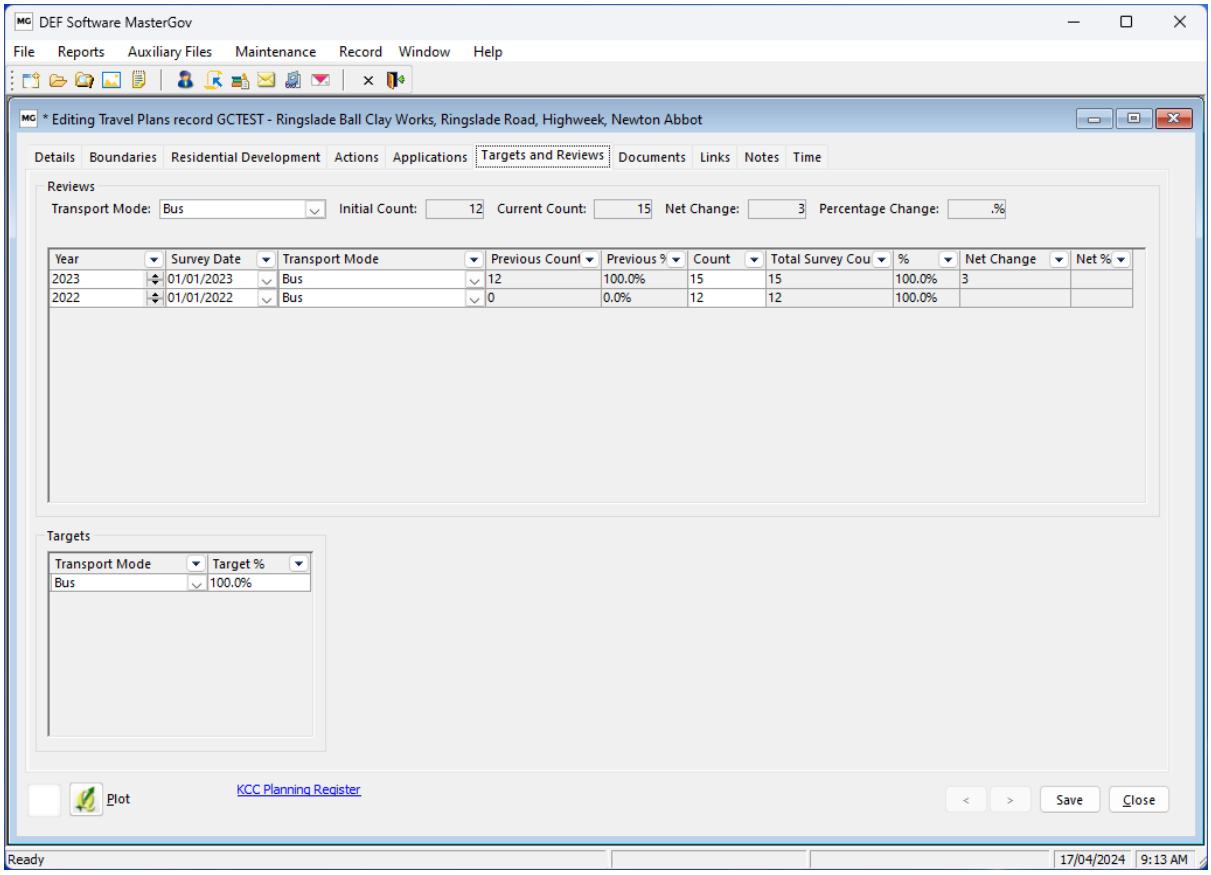
The Travel Plans module was written to specifically assist County and Unitary authorities to monitor their ongoing travel plans. With tight integration with Application Response, the system allows officers to link the source planning records from which the monitoring is required. The module allows officers to manage the full lifecycle of a travel plan including setting actions for various stakeholders to full monitoring year by year against any number of transport modes.

Administration

The module supports multiple travel plan types which can be set by the authority.

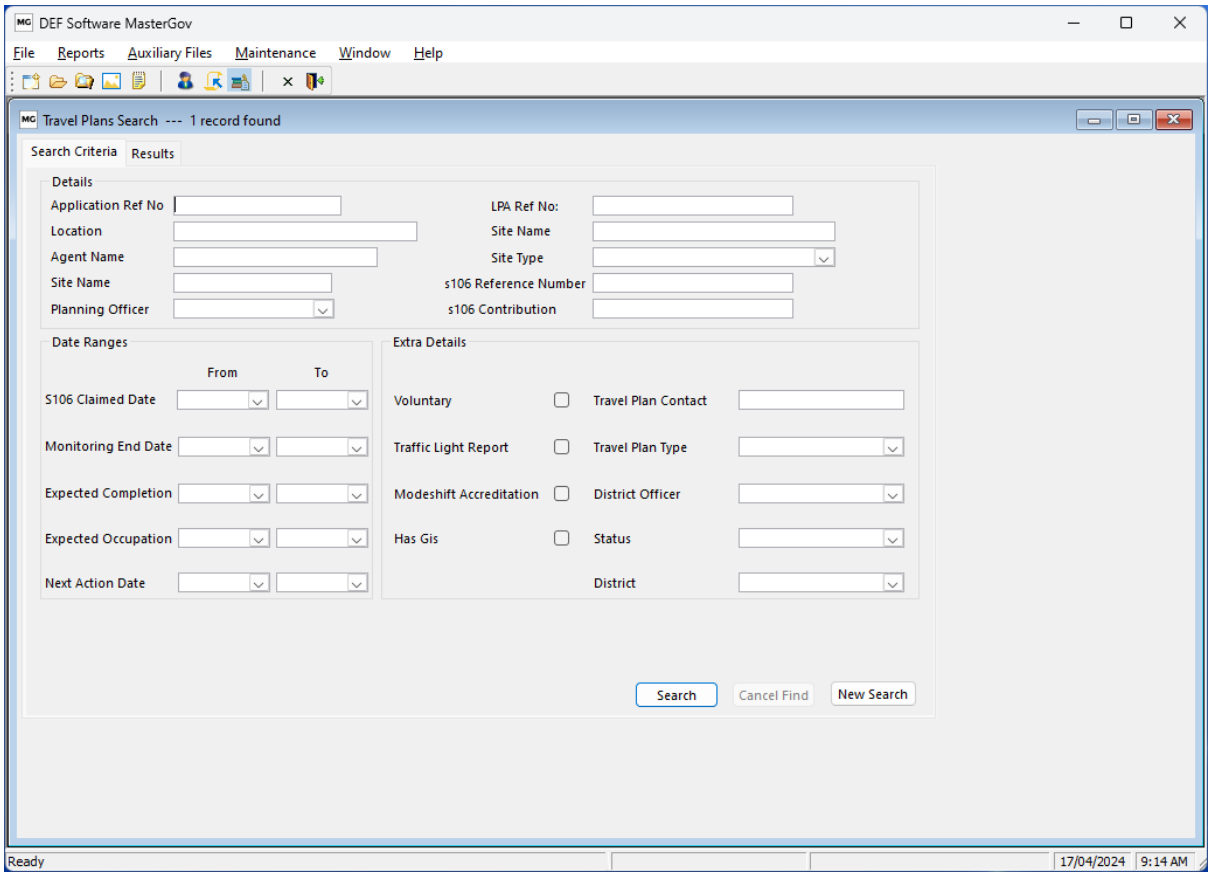
The module provides the following features:

- Residential development data showing dwelling breakdown and population profile
- Dedicated actions screen to record tass required with deadlines and ownership
- List of Planning applications linked to the travel plan
- Targets and reviews section to monitor the plan each year by transport type
- Tight integration with Application Response including geometry copying for GIS
- Built-in document management
- GIS integration
- Time sheet recording
- Reporting



Searching

As with all modules in MasterGov, the Travel Plans module benefits from a twin tabbed search facility.



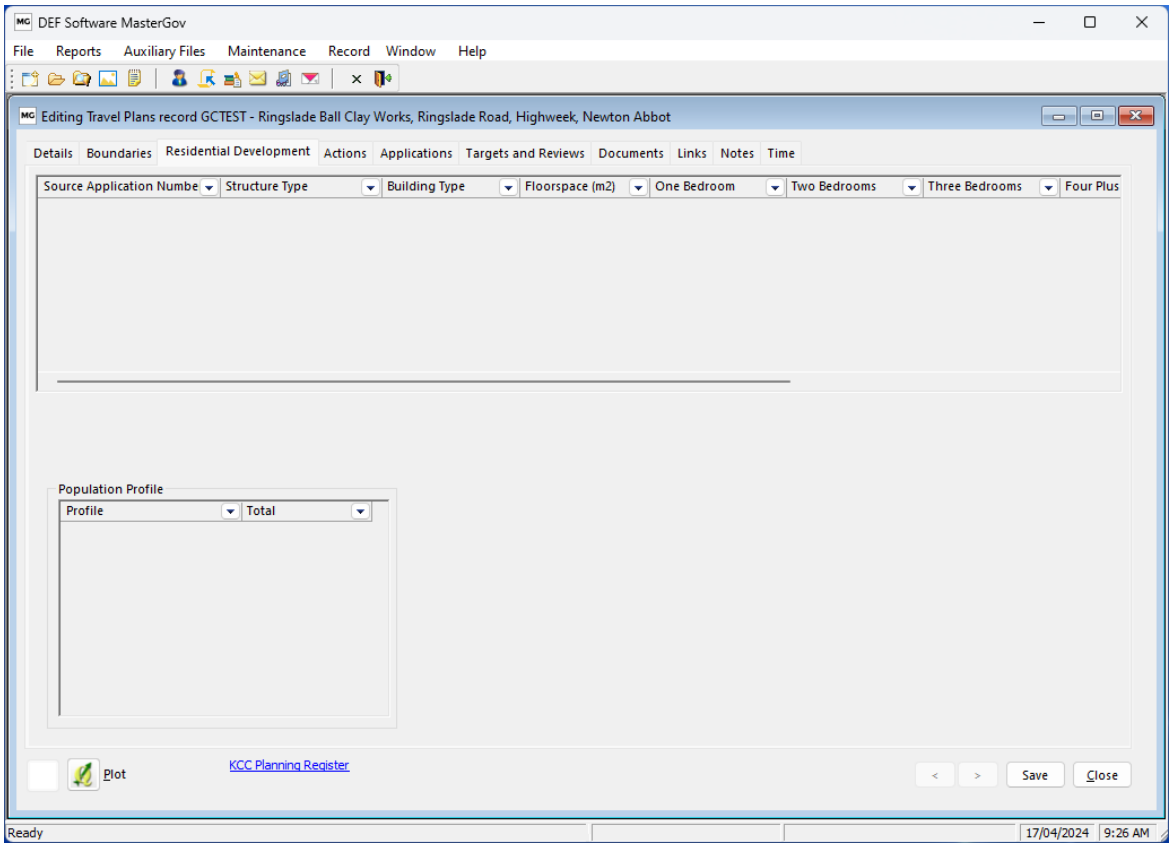
The first tab contains a plethora of search criteria with the results appearing on the second tab. Users can search using one or more of the criteria fields such as plan number, plan type, LPA reference, travel plan contact, status, S106 reference number, officer, key dates etc.

When a search is instigated, any matching records will be displayed in a grid view. Colour coding is applied to quickly show the user the status of the case.

From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

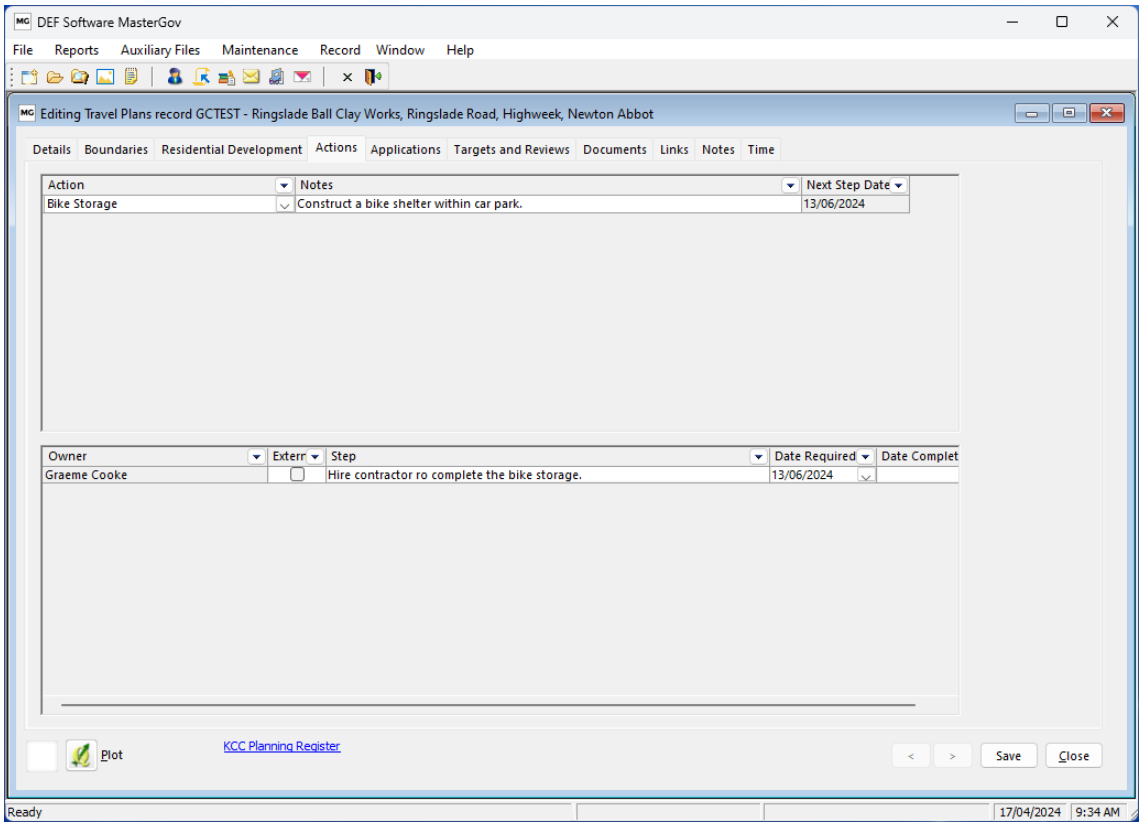
Residential Development

The dedicated Residential Development tab holds information related to the dwelling mix of the site as well as a population profile information. The tab mirrors the one within Application Response and is populated by linking to an Application Response record containing residential data. This tab can collate data from multiple Application Response records together and will remove data upon removal of a linked record.



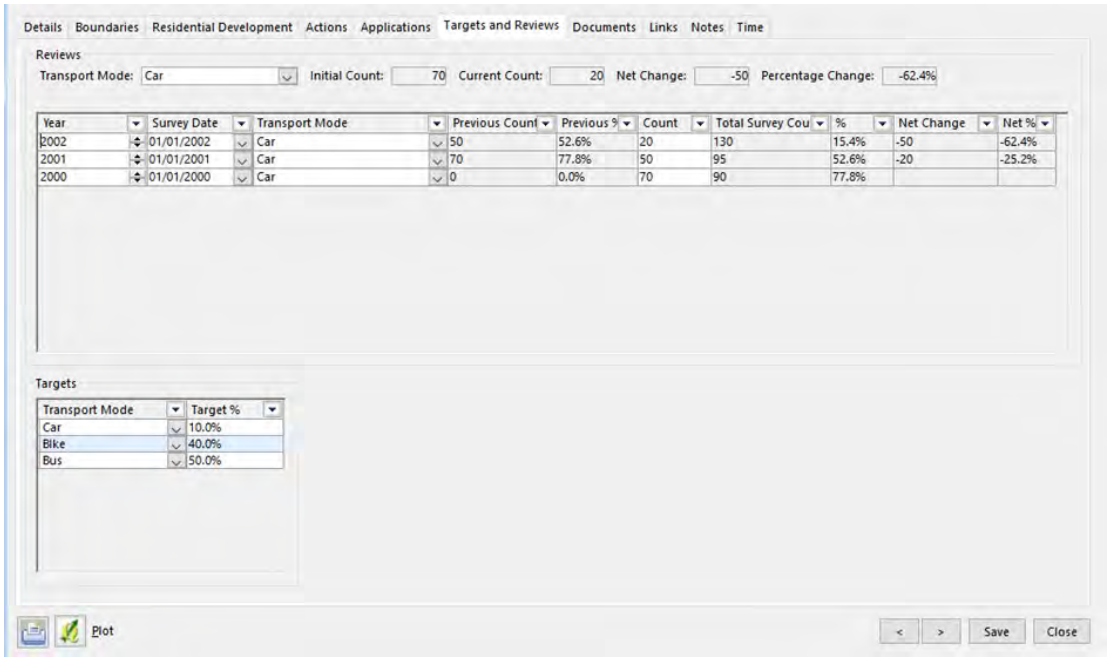
Actions

The tab contains a list of actions to be taken in accordance with the travel plan. Containing two grids; the tab allows officers to record overall actions to be taken such as construct bike storage. The lower grid contains the individual steps within each action and who owns them. Steps could include purchase materials, hire contractors etc. This grid also holds the action required by date which in turn sets the next action date in the action record itself. The details tab will also be updated with the earliest next step date within the record.



Targets and Reviews

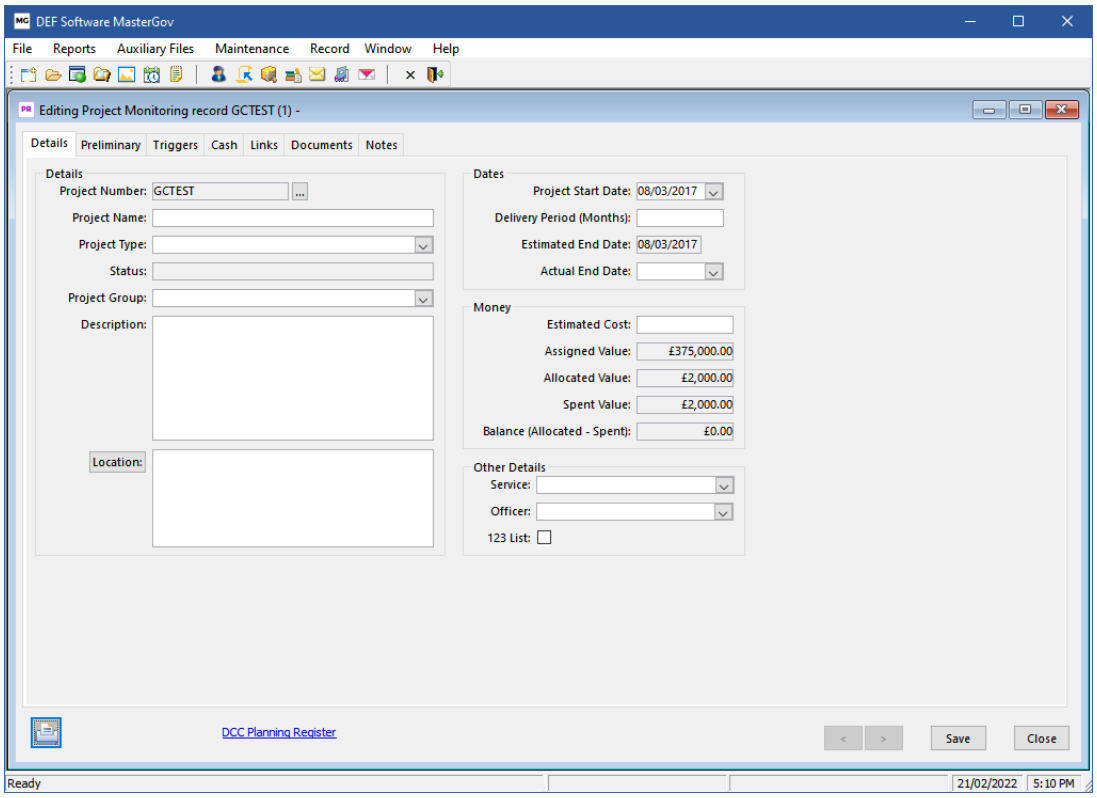
This screen contains the reviews of travel modes within the development over time and allows officers to set targets for percentage of use. The screen contains a grid containing annual monitoring records by transport mode. These records are the annual survey records which will then calculate share of that survey's responses for each transport mode, the change in count and percentage. The screen also benefits from a transport mode quick filter which shows summary information across all years for a specific transport mode.



Project Monitoring

The Project Monitoring module is a tool designed to integrate directly with Legal Agreements for the management of capital projects. The module shares obligations, triggers and financial transactions with Legal Agreements to make the allocation of monies to capital projects slick and transparent.

Although Legal Agreements does have the capability to allocate monies to projects without this module, it does not provide detailed tracking of the project. This module is perfect for authorities that do not have a capital project management tool.



The module benefits from tight integration with Legal Agreements meaning that any monies allocated to the project that originate from an S106 agreement will be automatically shown in that agreement. Furthermore, monies can be assigned to a project from other sources such as grants, private sector, CIL etc.

In addition, the system allows users to record spend of money held in the project. It is also possible to apportion indexation and interest to monies held on the project. All such transactions can be clearly seen in the finance tab of the module. It is also possible to affect a transfer of monies between projects. This is useful when a project has money left over.

The distinct advantage of the Project Monitoring module is the ability to see a holistic view of a project rather than simply seeing its collective S106 agreements. This is especially true where monies are sourced outside of S106.

Land Drainage

The Land Drainage module was originally written to meet the needs of the sustainable drainage system (SuDS) approval process with the ability to manage ordinary water course consenting. Although the SuDS approval process was abandoned in England in favour of a statutory the consultation role for LLFA the module persisted for OWC, investigation, enquiries and enforcement. The module is now in use for SuDS in Wales.

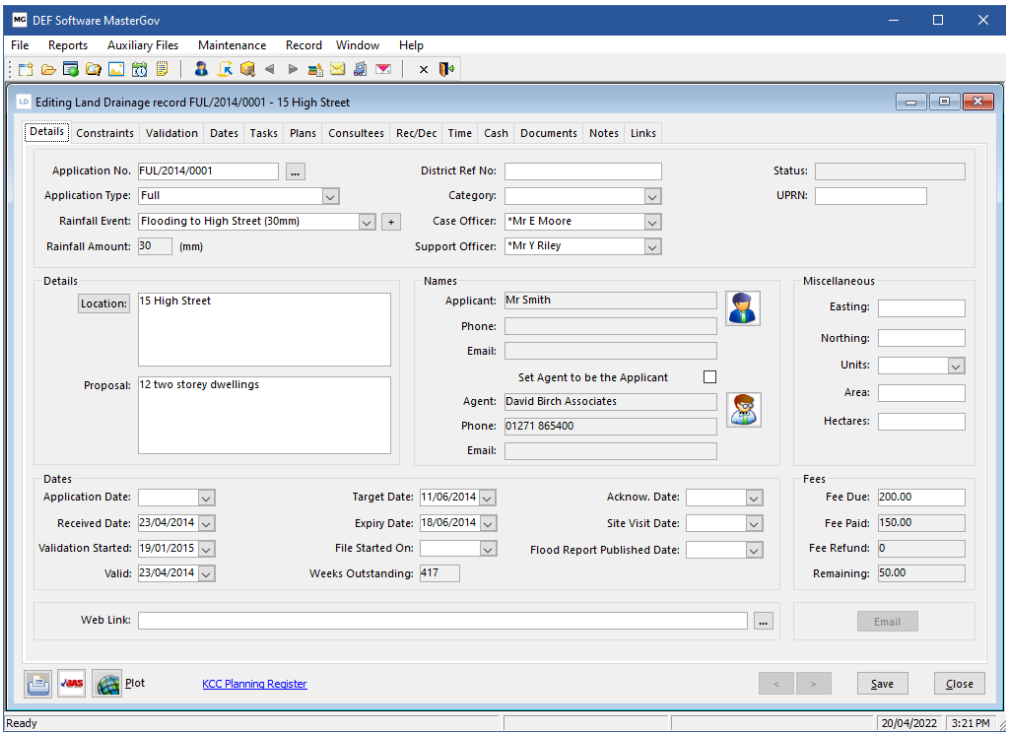
Case Management

The module supports every facet of the consenting process whilst lending itself to flood investigations and general case load activities. With GIS support, document management, workflow and the other MasterGov standard features the solution is a one stop shop for LLFA activities outside of consultation response.

The module provides the following features:

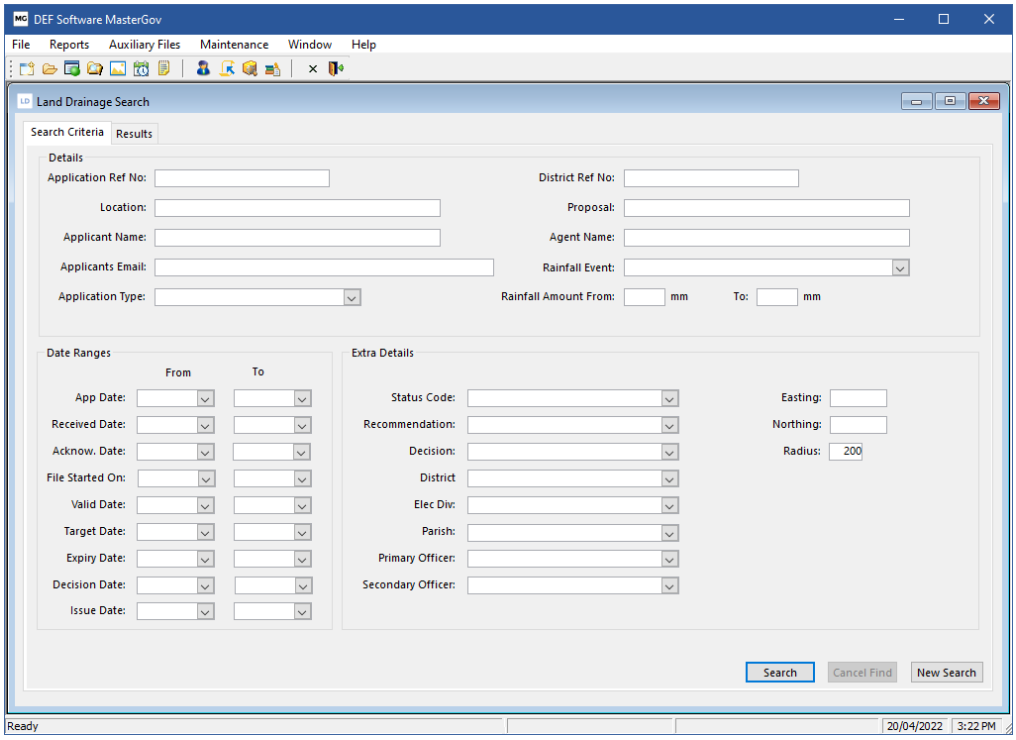
- Automatic date calculation
- In-built validation checklist with auto population from items linked to case type
- Integrated address book for applicant and agent
- Embedded plan management with supersede function
- Consultee capability
- Workflow functionality specific to case type
- Rainfall event selection or creation including rainfall in mm and rainfall return period
- Time sheet recording
- Discharge of condition ability on parent record
- Built-in document management
- GIS integration with constraint pull back

The module is in use in a number of County councils in England and has been involved over time by input from authorities.

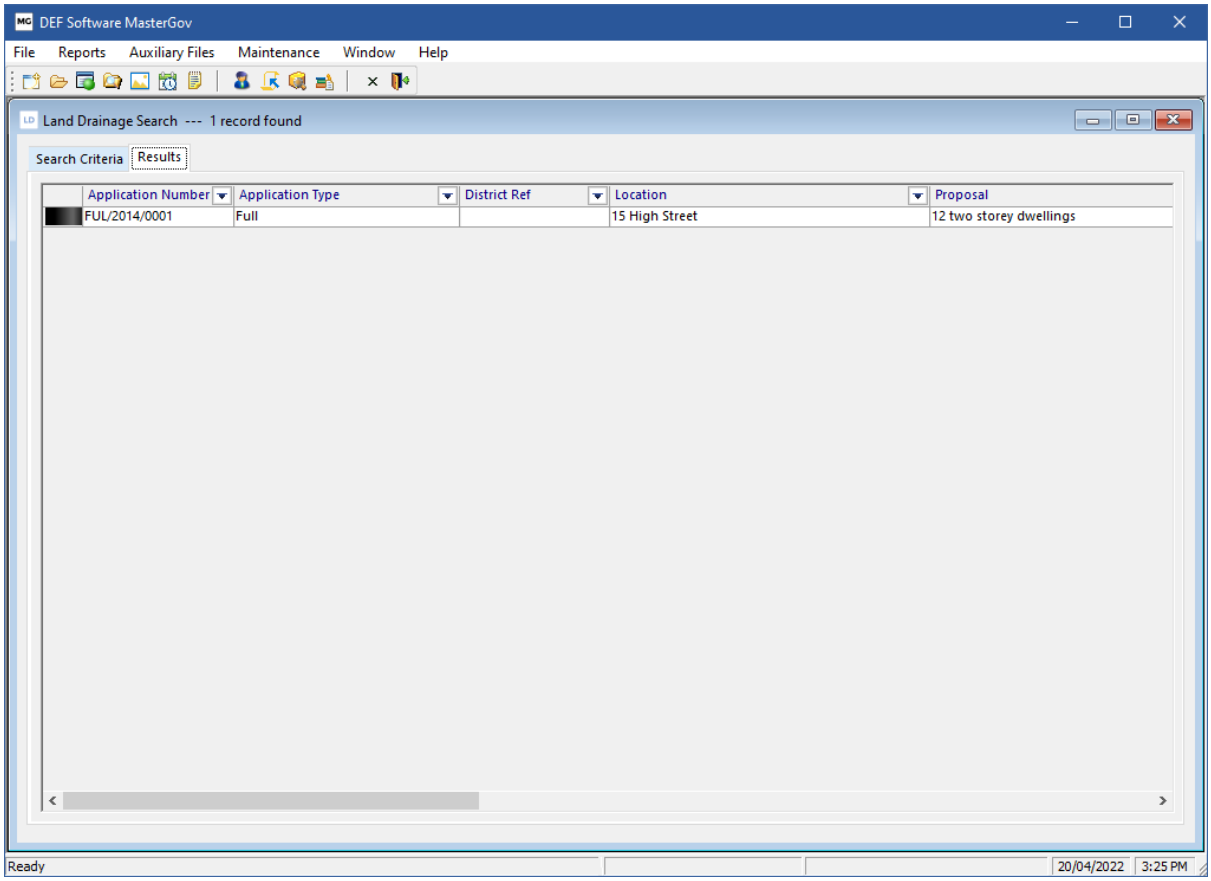


Searching

As with all modules in MasterGov, the Land Drainage module benefits from a twin tabbed search facility.



The first tab contains a plethora of search criteria with the results appearing on the second tab. Users can search using one or more of the criteria fields such as application reference number, location, proposal, rainfall event, rainfall amount, status, officer, key dates etc.



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From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

Nationally Significant Infrastructure Projects (NSIPs)

The NSIPs module has been designed to be a stand-alone system to manage a local authority's involvement with NSIP projects. The module enables users to:

- Record details of an NSIP through their various stages.
- Clear view of which stage the NSIP is at on the first screen (via status).
- Allow consultation at each stage,
- Store details of time spent on projects for the purposes of cost recovery,
- Provide a provision to record the discharging of requirements post decision,
- Be able to hold the details of multiple authorities involved,
- Have an option to hold constraint information manually entered,
- Store PINS contact details,
- Store documents related to an NSIP at all stages,
- Provide a single overview of all documents,
- Be capable of recording multiple notes,
- Have a web interface for officers to record time spent on an NSIP,
- Online portal for consultees to view NSIPs,
- Notifications of deadlines in advance and workload priorities using A/R Agent.

The module is broken down by the following stages of the NSIP process with each stage having dedicated tabs.

- Acceptance
- Pre-Examination
- Examination
- Recommendation and Decision
- Post Decision

In addition to the phase's tabs, the module benefits from tabs for Details, Constraints, Workflow, Billing, Finance, Documents, Notes and Case Links.

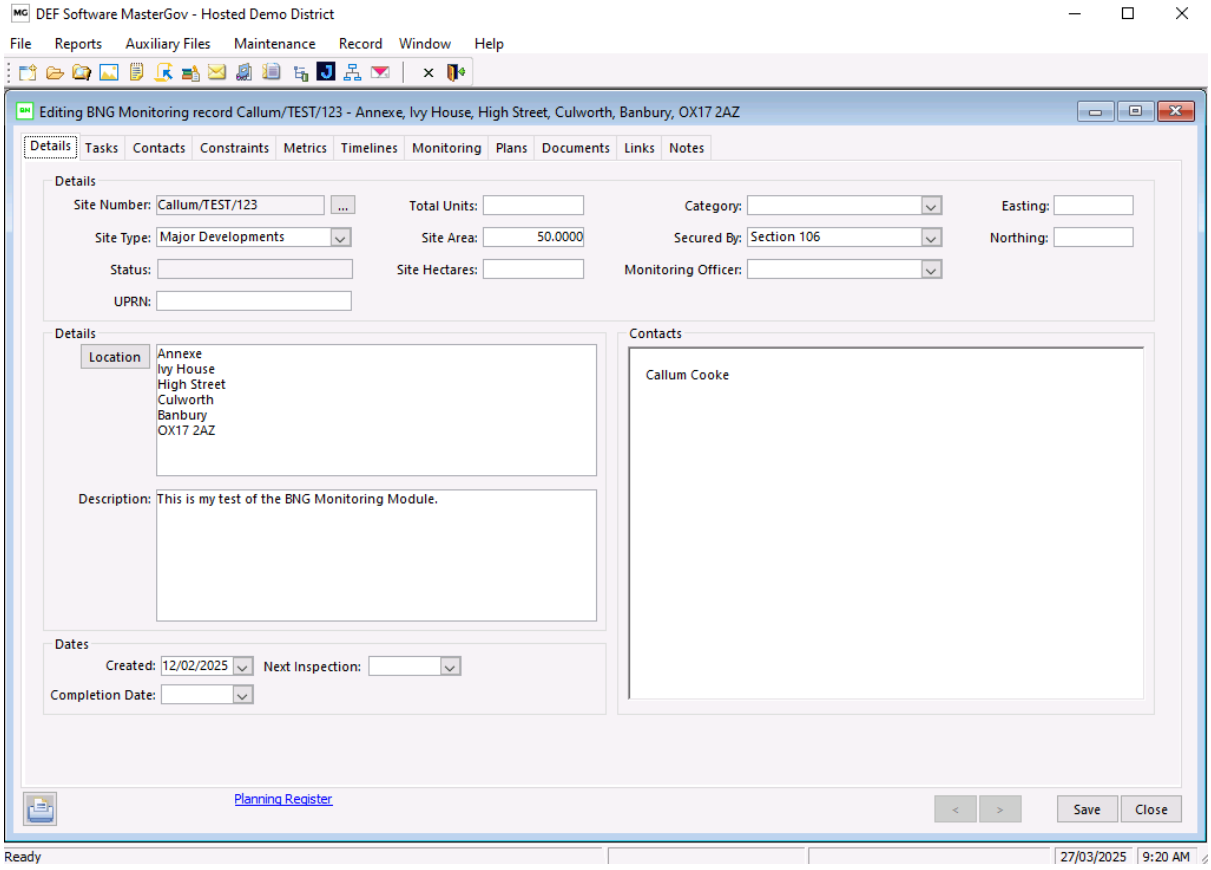
As with all MasterGov modules NSIP benefits from a twin tabbed search facility. The first tab contains a plethora of search criteria with the results appearing on the second tab. Users can search using one or more of the criteria fields such as reference number, project type, sub type, agricultural land class, status, location, proposal, officers, key dates etc.

When a search is instigated, any matching records will be displayed in a grid view. Colour coding is applied to quickly show the user the status of the case.

From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

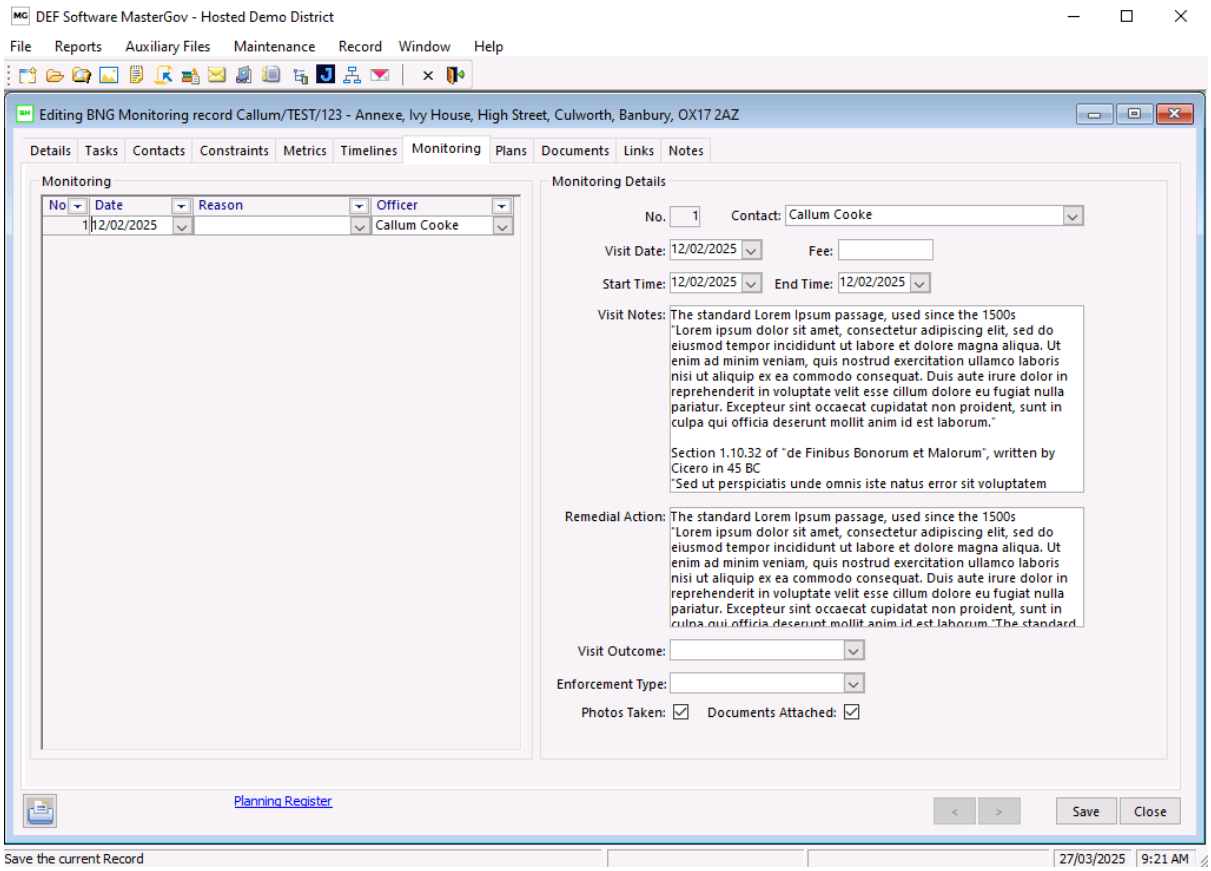
Biodiversity Net Gain Monitoring

The BNG Monitoring module has been designed to allow the Local Authority to fulfil its duties of monitoring Biodiversity Net Gain sites.



The MasterGov Biodiversity Net Gain module provides the functionality for the Local Authority to fulfil its obligation to monitor and / or inspect strategic Biodiversity Net Gain sites for 30 years following the approval of the planning application. Additionally, the module will enable the authority to report this data (textual and spatial) to central government and Natural England.

From the 8th of February 2024, Biodiversity Net Gain (BNG) became mandatory in England. The MasterGov Biodiversity Net Gain module records all "significant" BNG sites as designated by the authority and their related planning applications and legal agreements. The module will allow the authority to schedule visits to the sites to inspect their progress towards meeting the 10%+ gain as documented in the sites' Net Gain Plan. Details of the inspections, whether carried out by the local authority or the developer / landowner, can be recorded in the system and subsequently reported on.



Progress towards the achievement of the 10%+ gain can be recorded at a granular level by habitat type and area. Recording of the data at this level will provide the authority with its own register of "Strategic" BNG sites, contributing to the authority's commitment to climate change and improving nature and the general environment.

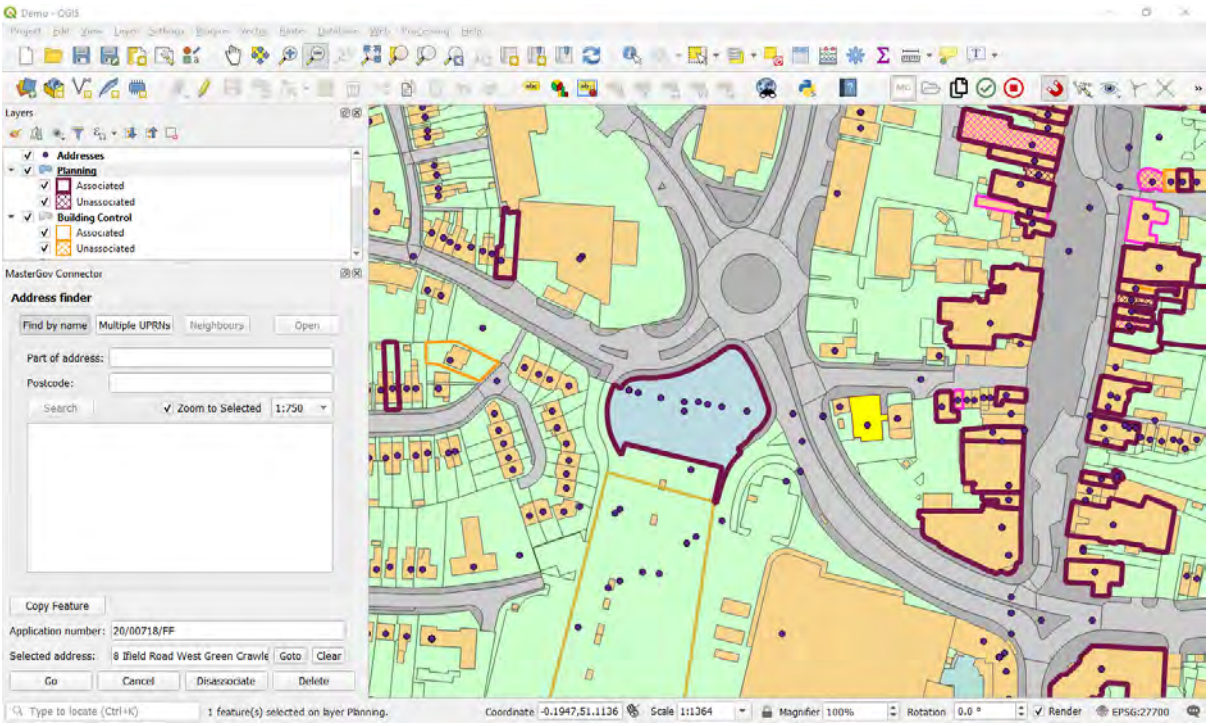
As with other MasterGov modules, the BNG module is supplied with GIS functionality, workflow, alert / reminder functionality, reporting and a document management system.

GIS Mapping and Property Gazetteer

Although MasterGov is very much a self-contained system it does rely heavily on interfaces with GIS and Gazetteers. The system uses both to allow other stakeholders to access module specific information spatially as well as providing MasterGov with a stream of external data.

DEF Software have developed a GIS connector to the open source QGIS product which is deployed on DEF's hosted platform. DEF have developed an integration for QGIS that significantly deskills the process of digitising applications and returning constraint and other spatial information back to MasterGov. DEF suggest that QGIS be used to read / write the corporate GGP spatial. This will ensure a single source of truth for spatial data.

The QGIS desktop client is open source and therefore free in license terms. It will work seamlessly and natively with the Council's existing GGPS GIS datasets. GGP GIS is Open Geospatial Consortium (OGC) compatible as is QGIS. Therefore, QGIS can read and write data to Oracle Spatial/Locator, SQL Server and PostgreSQL databases.



As the solution is hosted the Council data can be sent to DEF as Shape files although DEF would prefer the Council to supply WMS and WFS services or a direct feed from their spatial databases. In return DEF can supply plotted data back in the form of WFS services. DEF's connector works as a plugin to the QGIS desktop and allows for two-way communication with MasterGov and the QGIS.

In addition to digitising applications, the GIS connector is also used for allowing users to find and return property addresses for neighbour letters in Planning and Building control. Users can also open MasterGov records directly from QGIS by simply selecting case geometries and clicking an 'open' button in the interface.

Further to the above information, MasterGov utilises spatial elements to obtain lists of constraints such as SSSI, Listed Buildings, Conservation Areas and Flood Zones etc. as well as parishes, wards, the area of red line, coordinates of the plot, UPRN(s) if applicable and linked case history. These are all automatically returned back to MasterGov once the case has been digitised in the GIS link.

Furthermore, lists if neighbouring properties can also be returned from the GIS connector to make creating neighbour letters quick and easy. This data is written automatically to the back office database.

DEF have invested extensively in their GIS connectors to ensure that plots can be digitised quickly and efficiently. The 'one click' copy option in QGIS is a good example of this. Users simply select one or more polygon from either MasterMap or any other layer, click the 'copy' button and the system will copy the geometries, paste them to the relevant nodule plotting layer, merge them if required and leave the resulting polygon selected ready to be returned to MasterGov.

As a variety of information can be returned automatically this saves further time and reduces errors with human input.

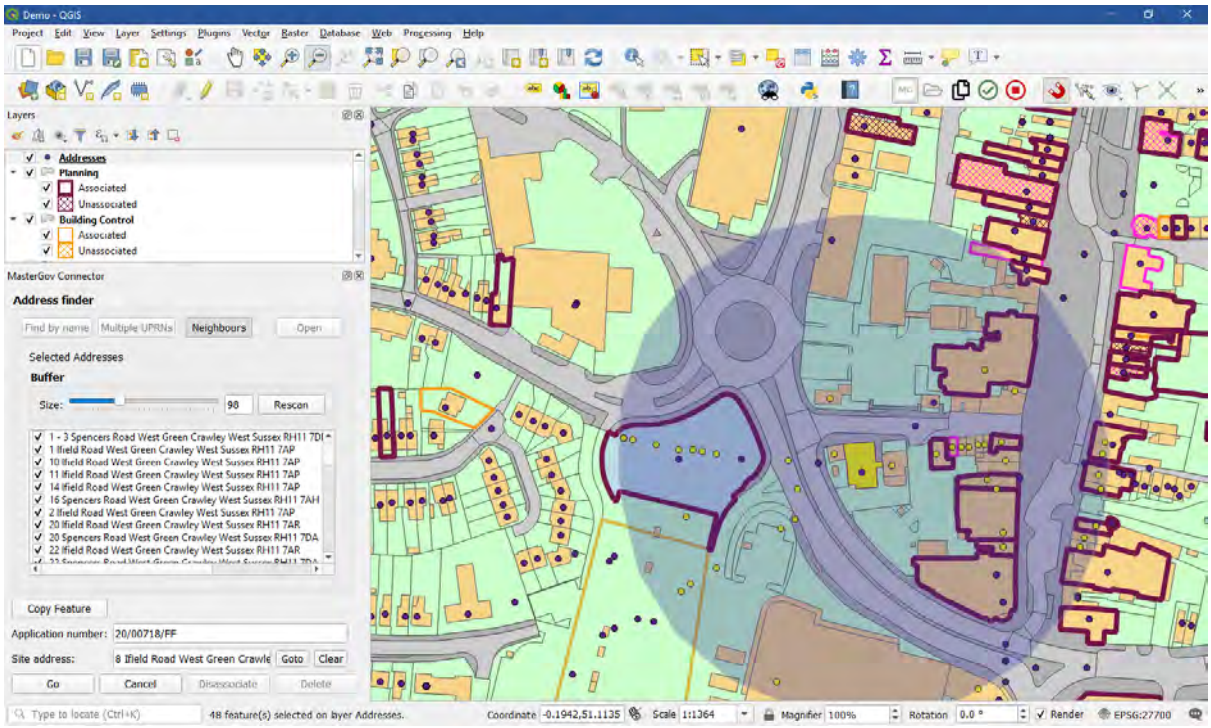
As well as the GIS integration, DEF also provide real time native integration to Gazetteers products. DEF do not have their own LLPG system but do provide a DTF importer which can update a slave LLPG dataset nightly using COU files. DEF can also integrate with cloud-based Gazetteers such as Symphony and GGP NGz.

DEF's DTF importer facility is a Windows service which automatically monitors a nominated folder for DTF files (either full or change only). When files are received, they are automatically uploaded to a Gazetteer dataset which is held within the MasterGov database.

The preferred solution would be to use a real time connection between the Gazetteer and MasterGov. This is an 'off the shelf' option in the system. It ensures that the system is always working to the most up to date information.

The DEF Gazetteer integration is essentially an address lookup facility which is available from multiple locations with MasterGov. Essentially anywhere an address can be entered into the system the interface is available. Users can search by part of an address (wild cards are built-in), postcode or UPRN. Matching addresses are displayed in a grid below the criteria. From here users can return the address back to the system which will also store the UPRN.

UPRNs can also be returned from the GIS system. MasterGov requires a layer constructed from the Gazetteer to ensure a single source of truth for addressing.



The same Gazetteer integration is also used on the public facing web front end wherever addresses need to be entered. An example of this would be the capture of an addresses during neighbour representation capture.

Core System Functionality

Search Functionality

All modules in MasterGov benefit from a twin tabbed search facility. The first tab contains a plethora of search criteria with the results appearing on the second tab. Users can search using a variety of module specific criteria fields such as case number, applicant, agent, location, proposal, officer, key dates etc. When a search is instigated, any matching records will be displayed in a grid view on the results tab. Colour coding is applied to quickly show the user the status of the case. The case status displayed is based upon authority defined rules which are automatically applied on case save back and once a day in batch mode.

From the search results list users can open, view and edit cases as well as being able to send the entire list to Microsoft Excel. As with all grids in MasterGov there is also a filtering facility available akin to that found in Microsoft Excel.

The system also benefits from a recently used applications list which shows the previous 10 cases opened in a handy menu. Users simply select a case to open it.

As MasterGov uses an MDI interface it is possible to return the search window whilst leaving a case record open. There are no limits to how many cases or search windows that can be open at any one time. Users can interchange between modules and open multiple search screens from one module. This allows users to keep a search results open whist instigating another search to perhaps answer an enquiry.

It is also possible to find cases from a UPRN history view and from QGIS. The UPRN history report allows the user to either select a UPRN with from the Gazetteer search or open the report from within a case and the system will take the UPRN from the active case. Once the report window opens all cases which are linked to that UPRN are displayed. Cases can then be opened directly from the report. The report can also be printed.

The QGIS connector allows users to select one or more case geometries from the map and open their related cases. If only one case is selected then that case will be opened in MasterGov. If multiple are selected then they will be displayed in MasterGov's search results tab so that users can open as required.

Work Flow

The MasterGov suite contains an integrated workflow system. This task-based system allows the Council to define workflow processes for each module and have the system automatically apply them as the case progresses.

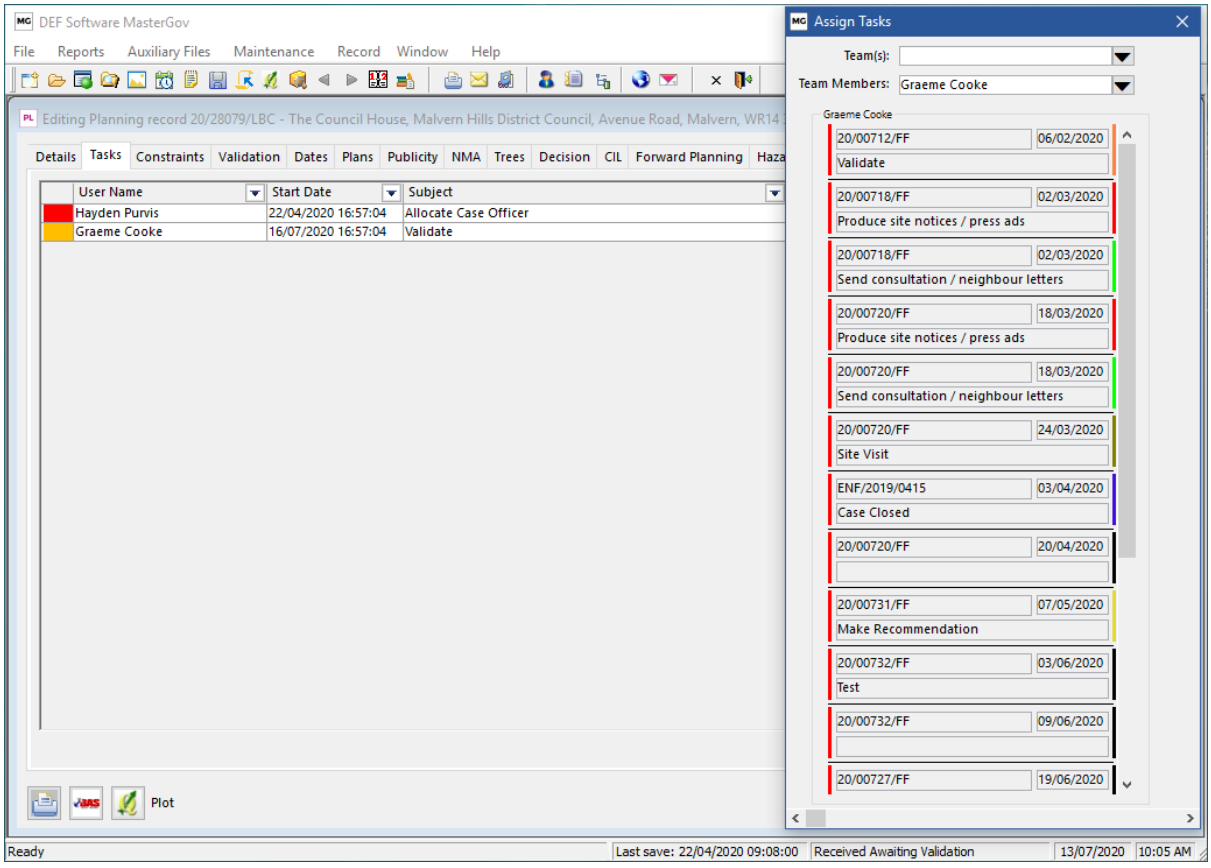
Tasks can be created when the case is registered, activated from the completion of another task, created based on data being entered into a nominated field or added to a case manually by a user. Tasks are allocated a number of days from which to start and a duration for how long the process should take. Each task is also allocated to a role, such as case officer, or team like 'Planning Support'. Tasks also have a priority and colour coding for easy identification. Tasks that are created during registration take their start time from the case detail. For example with Planning this is the received date. Tasks can be configured to take their start date from any date column within the module.

In addition to tasks being automatically created, the system supports tasks being automatically closed. This is based on authority defined rules set against the task type. This ensures that a user's

task list is always accurate based on the contents of the system record. Tasks can have multiple creation and closure rules.

Tasks can have authority defined conditions allowing complex processes to be mapped in the system. Conditional logic can be applied to both creation and completion rules to cater for a multitude of scenarios including only creating tasks for certain case types or being able to complete a task based on a specific value in a system field.

Individual creation rules also provide an opportunity to override the allocated party, start time, start time trigger, duration, priority and colour coding. This allows the authority to have different time durations based on entered data or alternative task allocation based on difficulty of the task.



Below is an example of a simple delegated planning workflow:

Task	Allocated To	Creation Trigger	Completion Trigger
Allocate Case Officer	Senior Officer	During registration	When case officer is entered
Allocate Support Officer	Admin Team	During registration	When support office is entered
Validate	Admin Team	During registration	When the valid date is entered following validation check list completion
Follow-up Additional Info	Admin Team	When add info request sent	When valid or when add info received date is entered

Publicity	Admin Team	When case is valid	Following successful generation of publicity paperwork
Site Visit	Case Officer	When case is valid	When the site visit task is completed either manually or uploaded from mobile working
Write Officer Report	Case Officer	When site visit complete	When the report completed date is entered
Recommendation	Case Officer	When report is complete	When the actual recommendation and date are entered
Sign Off	Senior Officer	After recommendation	When the sign off date is entered
Issue Notice	Admin Team	After sign off	When the issue date is auto populated from successful generation of paperwork

All of the aforementioned tasks will automatically be created and then closed at the appropriate time based on data entered into the system.

The Workflow system provides users with four distinct views of the tasks.

Task Allocation Window

The task allocation window is a users' first interaction with workflow. The screen can be configured to open with the system and it displays all the users' current open tasks by priority and date due. Users can simply double click on a task to quickly open the case. The window is arranged as a column of data with task colouring, due date, case number and task type all show. A red/amber/green colour coding is also shown.

In addition to being able to view their own tasks it is also possible to view team tasks and, if the user is a nominated team manager, the tasks of team members too. The tasks for both teams and other users appear as additional columns. The system provides the ability to drag and drop tasks between columns so that managers can re-allocate work and users can take work from a common team list.

Application Task View

This is a grid style view which is available to all modules. This view shows all the current tasks for the application being viewed / edited regardless of which team or user they are allocated to. This view resides as a tab on the case record so is available when looking at a case. When a task is complete it remains on the list but is shown as with light fonts and strike through. The task colour coding can be viewed along with the type and due date.

My Workload

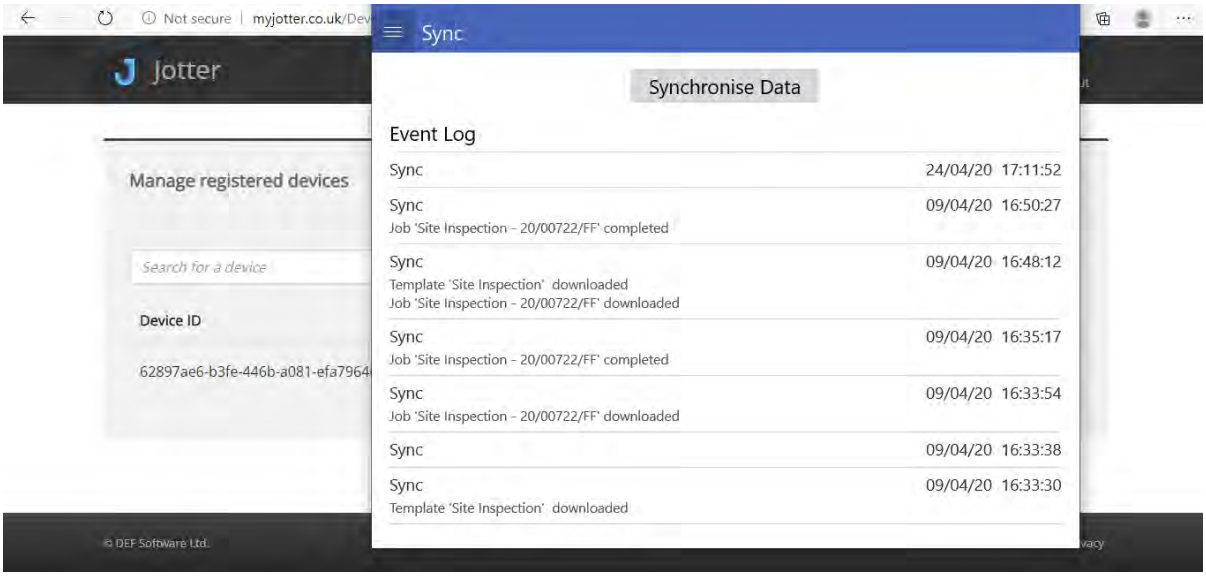
The final view is the 'My Workload' window which presents the user with a tabular view of their tasks. As the data is in a grid users can see more case information than on the task allocation window. Again users can double click on a task to open the case the task is linked to. The My Workload window can also float above other open system windows.

Underpinning the workflow system is DEF's Alert / Reminder Agent. This server side tool can be used to reminder officers when events are due or when a process has been completed. The system sends these messages to officers and other nominated recipients. The ability to send text messages to recipients is also supported.

Much of the event logic is automated with tasks being opened and closed automatically in response to data being entered into the system. This further increases productivity. The event column also represents a list of all tasks due at that time which focus' officers to the relevant cases requiring attention.

Jotter Mobile Working

The solution, which is completely cloud-enabled, allows access from a variety of internet connected devices, if the correct authorisation is available. This promotes the principles of mobile working whilst retaining efficiency for internal users. Using its dedicated mobile working platform, Jotter, case files can be downloaded and worked on outside of internet connectivity and then uploaded when access to solution is established. This allows officers to work in areas of limited or no internet connectivity without significant rework / retyping of the outcomes of any inspections or outside activity. Where internet connectivity is not an issue, Jotter ensures real-time connection to the back-office, with real-time access to case files and simultaneous upload of notes and other information created remotely.



This standalone system provides a highly extensible platform for the planning authority to create any number of job templates across any module within the back-office system. These job templates are then used as the basis for creating mobile working data collection jobs on mobile devices, and subsequently to complete the solution in a live environment, whether in the office, on site, at home, or from any remote location which has internet connectivity.

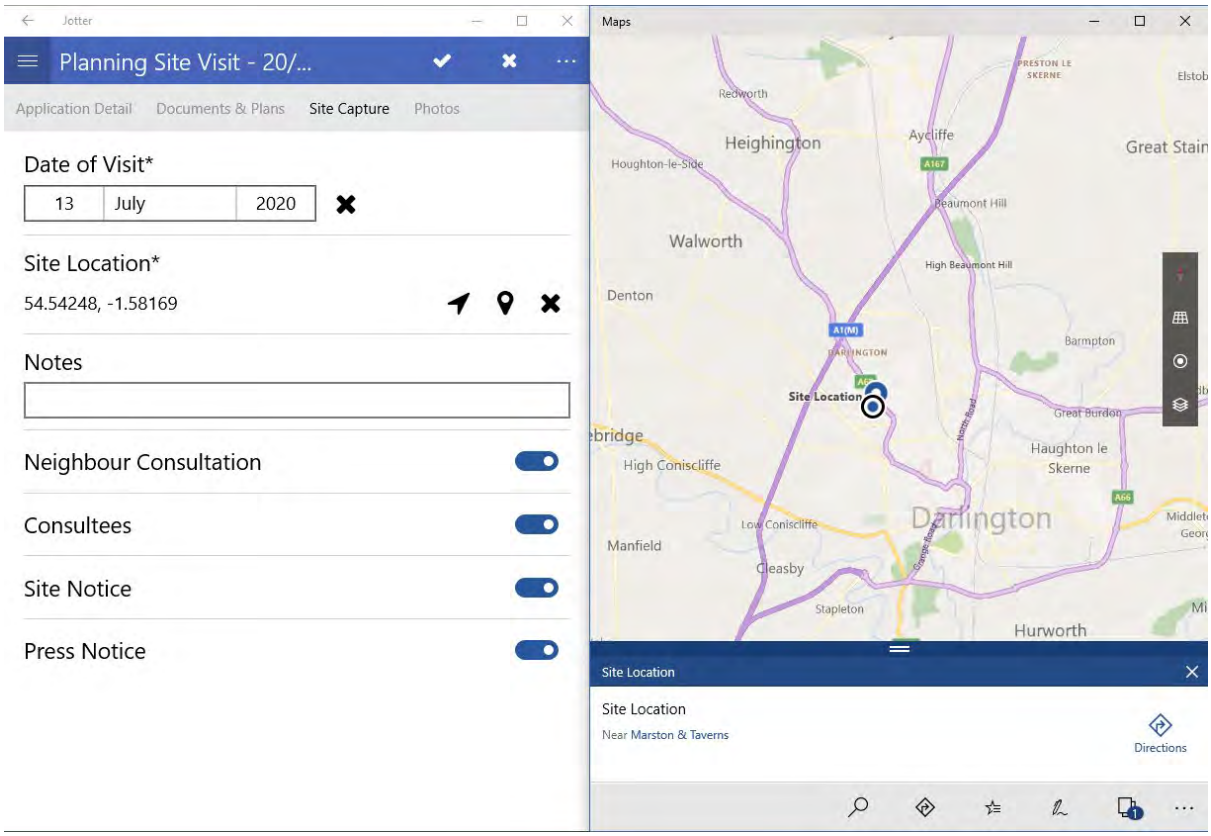
The Jotter solution is made up of the Jotter website, back-office template mapping interface, integration API, back-office job creation interface and the Jotter mobile application.

The website is used to create and edit job templates as well as managing users and mobile devices. Users can create any number of templates using a GUI drag and drop form generator. Job templates can be made up of column types including text, numeric, decimal, check box, dropdown, photo, document and geo location. In addition, the job template can contain a grid control with grids being able to contain all the afore-mentioned field types.

Once a job template has been created it can be mapped to the back-office system schema using the template mapping interface. This facility allows the authority to map fields on the job template to system fields for both read-only and write usage. The mapping also provides the job template with the required field lengths and populates drop downs. This decoupled approach makes job template creation simple and ensures that schema changes and new look-up lists in the back-office are automatically applied to jobs on Jotter. Decoupling also means that Jotter can be used with other systems beyond the MasterGov back.

Once the job template has been mapped it can be used from within the MasterGov back-office for job allocation. Jobs can be allocated from common interfaces such as the search results screen, workflow system and from the toolbar of an open case file. In either case the user instigates a job creation task where they simply choose the required job template and, where applicable, the recipient. Once chosen, the system, via the API and Jotter website, will send the required jobs to the Jotter application for user acceptance.

The Jotter application is a native application which can be used on Android, iOS and Windows (UWP). The system is flexible enough to support different device types within a single planning authority. The Jotter application can work entirely offline and only requires data when carrying out a sync of jobs. Uncompleted jobs are presented to the user in a list format which is selectable. Choosing a job allows the user to view the data behind and decide whether it is to be accepted. The job is completed on the mobile device by following the flow of the job template. Data entry is governed by the job template with mandatory fields being enforced.



Users can take advantage of the photo field which will link to the device's camera or photo roll. Capturing geographic location is very simple. Pressing the compass icon next to that field will insert the GPS location. Where a date is required, a single touch will apply today's date and a subsequent touch will launch a pop-up calendar. All features are designed to make the remote capture of data as efficient as possible.

When the job is completed, the user simply marks it as such and during the next sync the job will be downloaded to the back-office. Any data is automatically loaded into the database and indexed against the case file. Documents are loaded and indexed into the DMS. A PDF of the job template is also created and written to the document store. This allows for jobs to be created with fields that exist in the back-office. For example a planning site visit check sheet. As the system can update back-office fields, Jotter can close tasks in the workflow or update a Building Control inspection record, if needed.

Examples of Jotter usage are:

- Planning site visits (with site notice locations gathered)
- Enforcement site visits
- Officer reporting of enforcement issues whilst on site
- TPO inspections

The Jotter solution will allow the authority to both reduce errors and improve efficiency by allowing users to capture information and photographic evidence in the field and have it automatically uploaded to back office without further handling of the data. As such there is no opportunity for human errors in data inputting.

Fields

As with any case management system MasterGov's database is made up a large number of tables and fields. These are of course exposed in the MasterGov front. The schema has been designed to maximise efficiency of the system whilst ensuring data integrity at all times. MasterGov uses a variety of field types including date (from popup calendar), string, number and drop down. Most drop downs in the system are populated form lookup lists which are set by the Council. Each module has specific fields relating to that type.

The Council can also define custom fields in each module and also have the ability to define which fields are to be mandatory. These can both be accomplished by users with sufficient permissions directly within the system without specialise IT skills. Mandatory fields have a highlighted background colour which can be set by the council. The Councils will not be able to change fields or labels themselves beyond the custom fields but DEF can change them during implementation.

In the case of case reference numbers the Council can set the format of the number not just on a per module basis but on an application type basis. These formats can include application type, year and next number.

Fields like application type are set from an authority defined drop down pick list and can be changed during the process. All pick list are within the control of the council. Where changing the type will have a knock effect on the system a message will be displayed to the user the appropriate action automatically taken by MasterGov. Lookup lists such as application types can be updated by users with sufficient permissions directly in MasterGov.

Fields for statutory expiry dates are auto calculated based upon rules assigned by the Council. As such the authority has complete control over statutory date calculations. These include, but are not limited to, Planning determination periods, Planning publicity expiry, Appeal timetables, Planning permission expiry and Enforcement target response times. In all cases the logic behind these is controlled by the authority.

Fields for consultees, agents etc. are also held in specific lookups for easy re-use.

Fields in MasterGov have access to a number of standard features such as copy & paste and spell check.

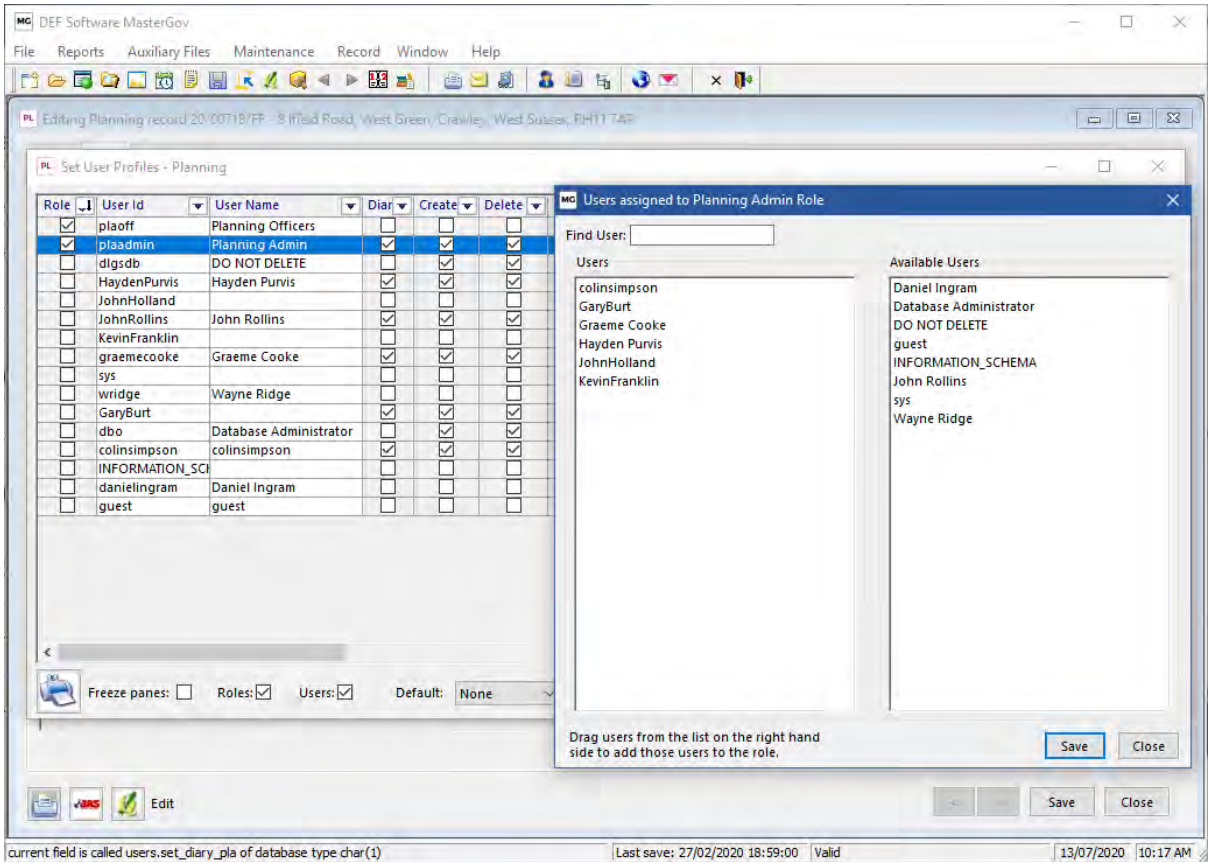
Access Control

DEF recommend using an Active Directory group which is added to the SQL Server database to provide system access. In doing so the DBA does not have to add individual users to the database server. Instead individual users will be added to the AD group. All users in the AD group will have read-only access to the database's public role but nothing else.

The hosted solution does not have the concept of single sign on so DEF match the Council's Windows logins to make the process of authentication simpler. These logins will be added by DEF to the hosted AD. Post go live users will be added to the system by DEF upon request.

MasterGov's user permission are maintained within the client software and can be edited by a system admin. IT are not expressly required although some local authorities prefer to operate this way. Each user can have fine grained permissions with each operation and screen access mapped to a specific permission. Each tab in the system has its own permission and each user has flags to control case creation, renaming, deletion, printing, editing of lookups, document publication and access level to GIS. There are also some general permissions such as user editing, main lookups, system options, Alert / Reminder rule control etc.

The aforementioned permissions can be applied to individual users although the most efficient way to manage access control is to use roles. Any number of roles can be created and users can belong to any number of roles. Users are then given, in each specific case, the highest permission based on their role membership.



System admins have full power over access control including creating users, deleting users, administering roles, viewing all users, viewing all logged in users and seeing which applications are locked for edit. As stated the system uses AD single sign on so passwords are not set by MasterGov system admins.

As an additional layer of security the system can be configured to ask users for their Windows password. Upon login MasterGov will ask Windows to confirm the password is correct. The password is not stored by MasterGov at all. If this is not used then single sign is implemented without the user having to enter either a user ID or password.

Access restrictions are not field based but rather screen based. However DEF can tweak so fields for council specific business logic during implementation.

System Admin

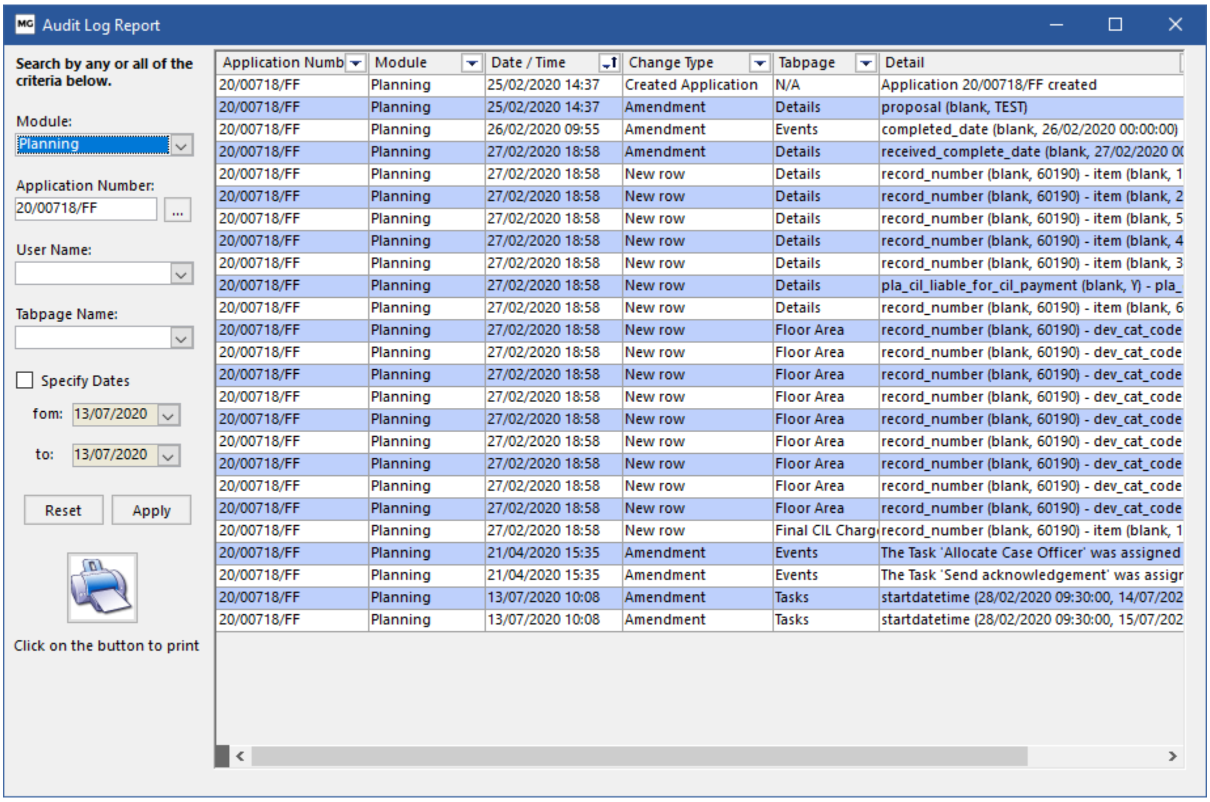
All system admin tasks are performed within the MasterGov system without requiring IT. This includes:

- Letter template creation with Microsoft Word
- Lookup lists
- System Options
- User maintenance
- Mobile Working configuration
- Alert / Reminder Agent rules

System admin tasks are controlled by separate permissions to ensure that tasks can be delegated efficiently.

Audit

Every change, no matter how small, is logged in MasterGov's audit log. The date & time of the change, the user ID, the module in question, individual field and screen name are all logged along with the before and after text values. An interactive reporting facility is also included to allow users with sufficient rights to intelligently query the log.



Environments

DEF will provide live and test environments with the test being a full end to end replication of the live system. This is covered by the license terms.

Document Management

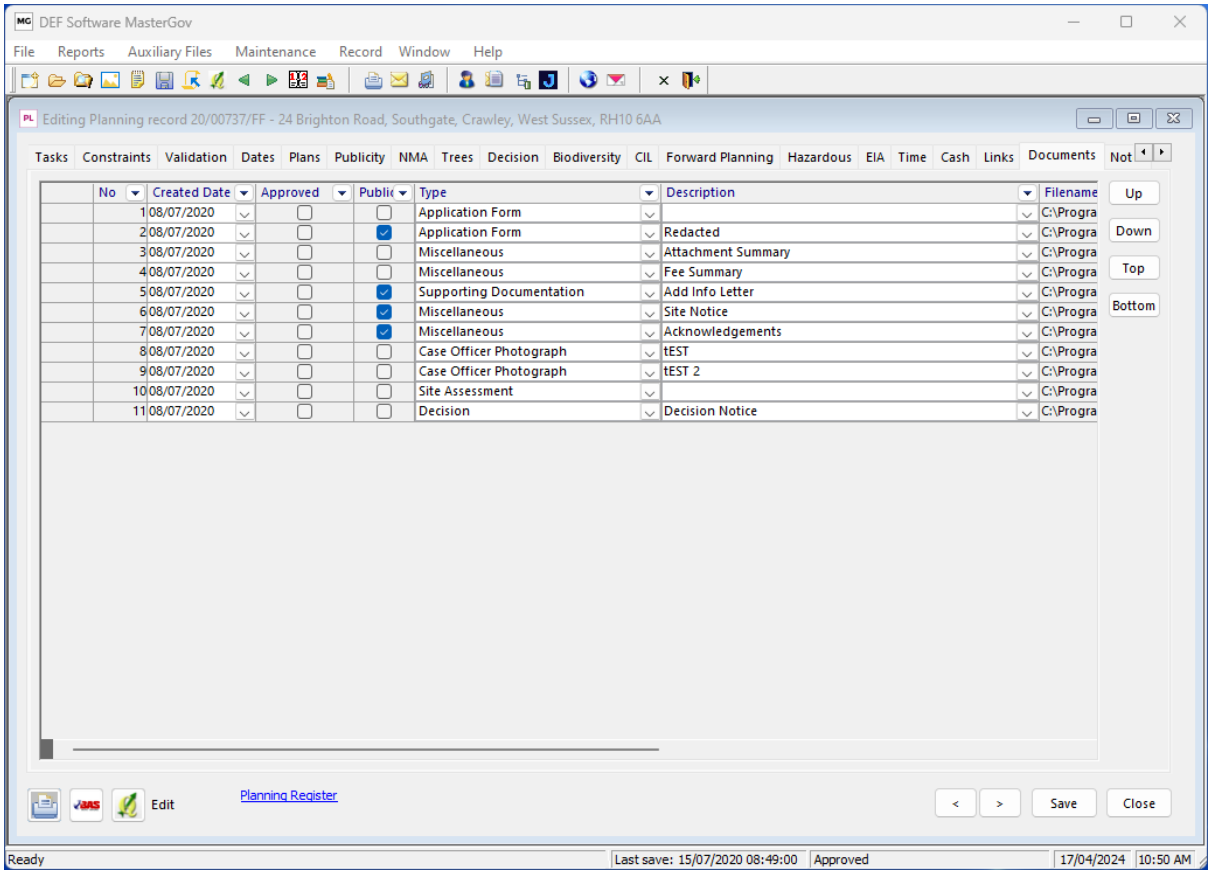
Although DEF have interfaces with third party DMS solutions MasterGov is supplied with an in-built document management system. This is DEF's preference for the Council. This system allows users to link any number of files to a case record directly from within the case record itself. There is no requirement to open a second system or navigate away from the case. Users can view all documents pertaining to a case on a dedicated documents screen and filter them using Microsoft Excel style column filters. As well as being able to view a list of documents here users can also open, print or email documents directly too. Document management is available throughout the suite with all modules benefitting from the DMS system.

The document management provision has a number of features including:

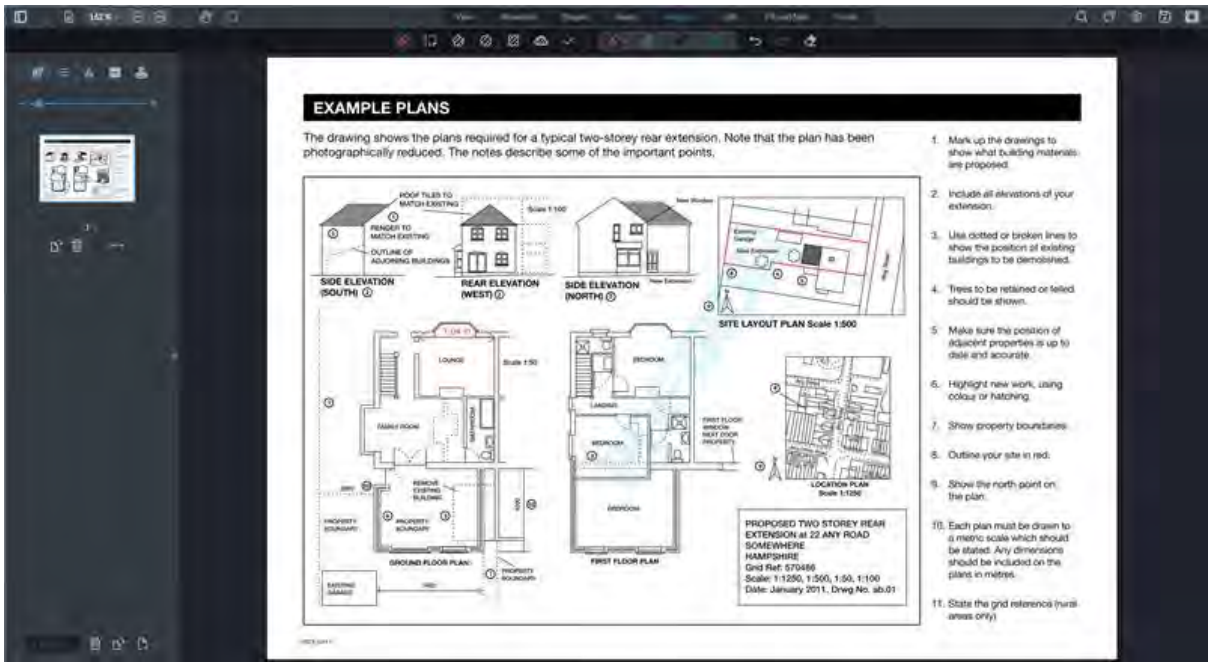
- Opening files directly from case
- Drag and drop files from Windows Explorer to MasterGov
- Drag and drop emails (with attachments) from Microsoft Outlook to MasterGov
- Drag and drop files from MasterGov to Windows Explorer and Microsoft Outlook
- Blacklist facility to remove emailed files such as signature images
- In-built PDF redaction
- Duplicate option (useful for redacting)
- Integration with Objective Trapeze (optional)
- Copy files from one application to another
- Convert to PDF

- Direct file printing from case
- Folder view of documents
- Ability to assign metadata to documents and add textual notes

The document management provision has direct integration with the Planning Portal's systems. As such any associated documentation submitted from the Planning Portal will be imported directly into the system and automatically indexed to the case in question.



The integration with DEF's Plan Viewer allows the system to provide additional redaction tool and measuring tools for plans and documents. The viewer also provides other industry specific tools such as electronic stamping and comparison tools.



In addition to the dedicated Documents screen the system has a dedicated Plans screen. Although the Documents screen can be used for Plans the dedicated Plans screen provides additional meta data and the ability to supersede plans within the system with the screen only showing current plans. This eliminates the need for officers to search through large volumes of plans to find the current version. Previous versions of any plan can be easily accessed using the in-built history view. The aforementioned document management features are also available from the Plans screen.

As well as being able to access documents on a case the document management also has native integration with DEF's public facing online register for displaying plans and documents to members of the public and external stakeholders. The public facing web front end can also, via DEF's API, update the document management system with files submitted with pre-application enquiries, representations or online Enforcement complaint submissions. It is worth noting that plans and

documents are viewed in a single list online irrespective of whether the separate Plans and Documents provisions are used in back office.

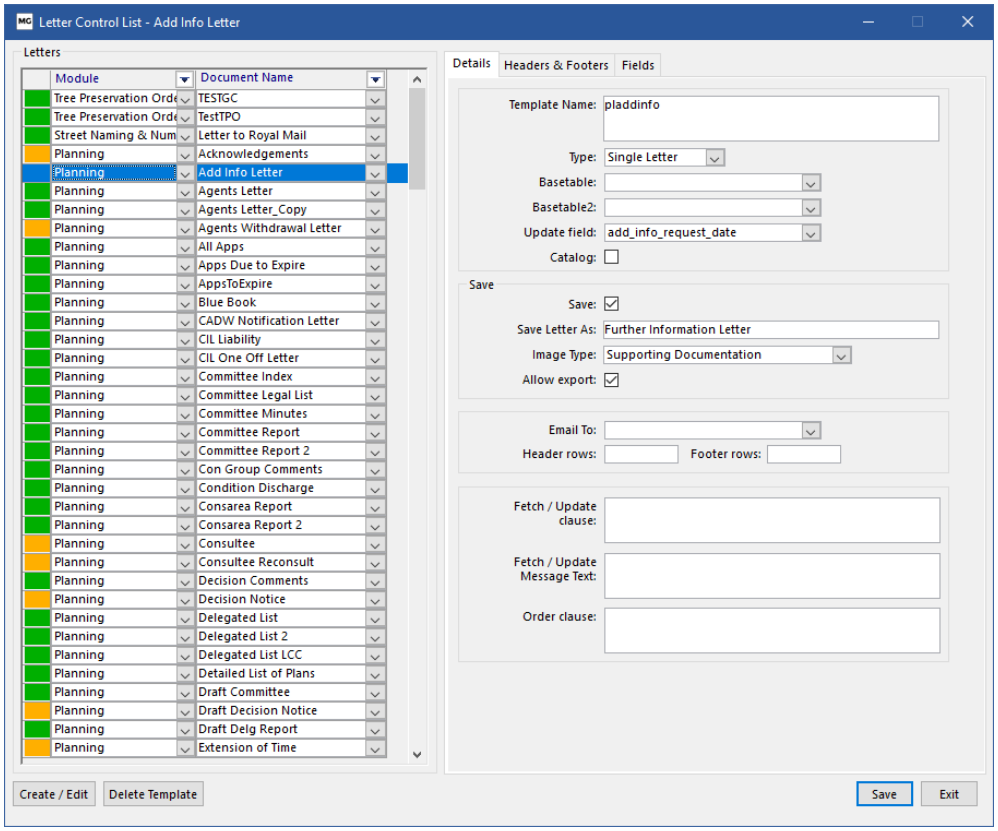
The DEF document management provision helps customers improve service levels by providing all required tools and in single place attached the case management system. Being able to import and index documents from the Planning Portal ensures that human errors are reduced as well promoting further efficiency savings.

Document Generation

MasterGov is fully integrated with Microsoft Office (2016 and 365) with all standard letters / documents being produced in Microsoft Word. The system allows admin users to define document schemas within MasterGov which are then used in MS Word to create the actual document template.

The schema contains all the required merge fields along with a number of other values including the template file name, the type of template, what date should be updated upon generating, the child tables to link to for data, whether the output should be a Word directory, a flag and settings to govern automatic saving of the generated document, whether automatic emailing should be triggered and any addition conditions to control whether the document should generate. The schema definition also allows the user to specify a header and footer from a pick list of predefined Word documents. This allows the council to define headers and footers separately so that in the event they change administrators don't have to change every template.

The saving settings control how the template will save upon document generation. Users can set an image type from a pick list so that the finished document is auto indexed in the document store. This also governs whether the resulting document will be saved as a PDF. The saving settings also have a setting to govern whether the document should be published to the web. Again, this is save a user having to do this manually for certain document types.



Once the schema definition is complete the user can invoke Word directly from MasterGov. If this is a new template, then the system will ask whether the user wants to start from an existing document. If they choose yes they can select a Word document from disk and this will be loaded. If they select no then Word is loaded with a blank document. In both cases Word is open at the 'Mailings' tab ready for merge fields to be added to the document. As this point the user is working within Word exclusively using the pre-merged header supplied by MasterGov.

If the template already exists, then that document would be opened and presented to the user. Again, with the 'Mailings' tab being selected. This allows users to add to the schema definition and update the template with ease. Users can also create variant named templates using data from the system. For example, an acknowledgment letter might require a name of 'plackFUL.doc' where the beginning of the name is text but the latter portion is being pulled from the record. When a variant is edited, the system will show all templates which match the mask.

All of the above documents designated with a type of 'single letter' are made available to users from within a record using the document generation button. The type of 'batch letter' is made available from the batch option in reports. Finally, the type of 'merge field' allows the council to create a merge template but have that merged into another document at runtime. This is useful for merging formatted tables into other documents.

Reporting

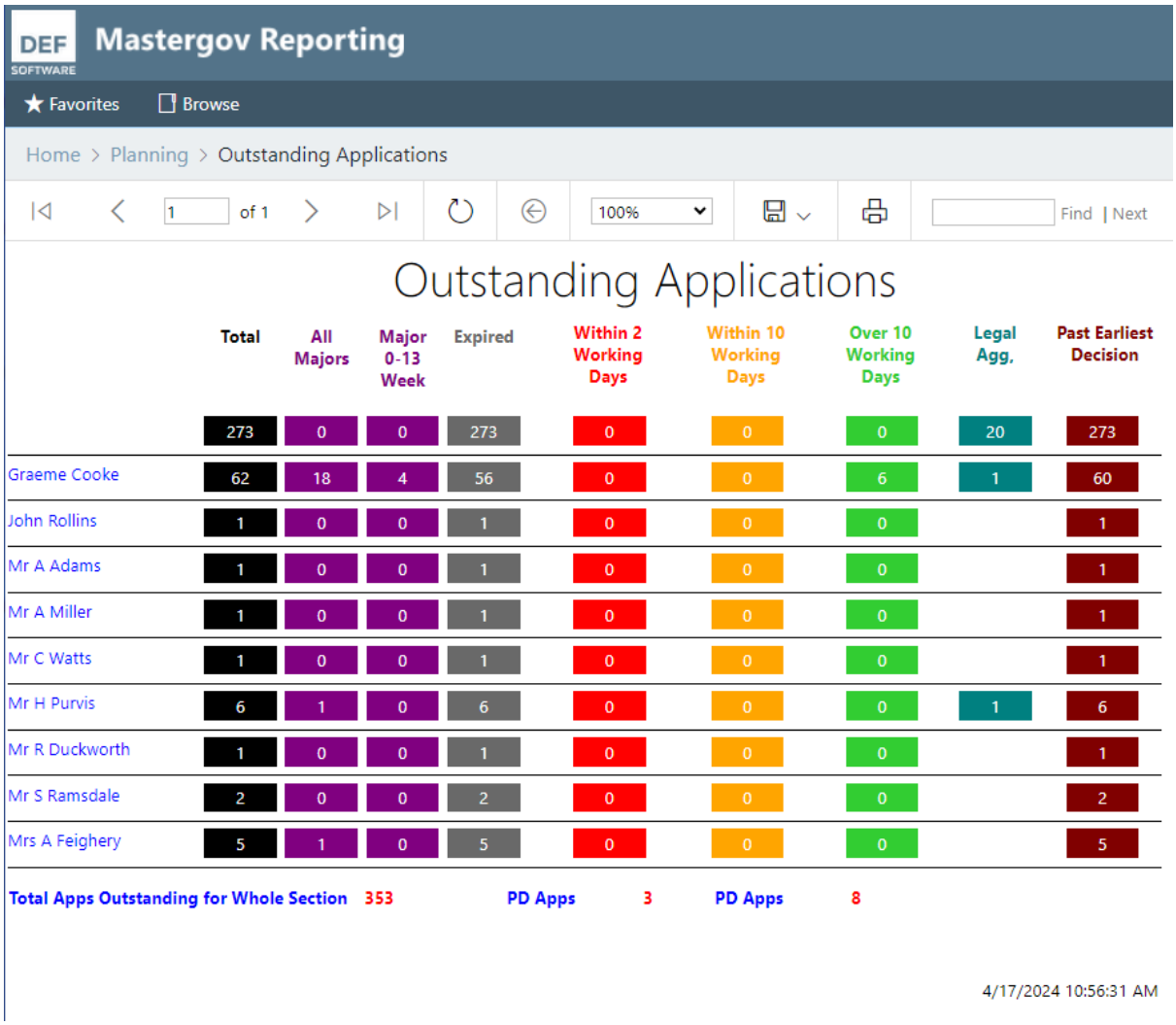
In addition to the standard built-in reports such as sustainability indicators, weekly list etc. the software also has a query builder which is excellent for FOI requests and a SQL Server Reporting Services (SSRS) interface. SSRS is deployed in the hosted environment along with its associated report builder tool.

The Query Builder provides users with a place to create queries which can be ran to generate output files in Excel, CSV and XNML formats. These files can then be opened by the system in Excel or other solution. The Query Builder can also output results to the search window results grid which allows users to open cases for edit. The Query Builder also has a web output mode which allows users to build queries which contain spatial coordinates and output the results to map view.

DEF recommend using SSRS for all reporting in the system. Indeed, DEF will supply all required reports in SSRS format. SSRS has several advantages including the following:

- Bundled with SQL Server
- Industry standard
- Web based meaning stakeholders can access reports without MasterGov
- Capable of textual, graphical and spatial reports so ideal for dashboard views
- Underpinned my Microsoft Active Directory permissions
- Able to auto send reports via email to set distribution lists

As stated DEF will supply required reports in SSRS however the Council would be able to create reports for use with the system without needing DEF.

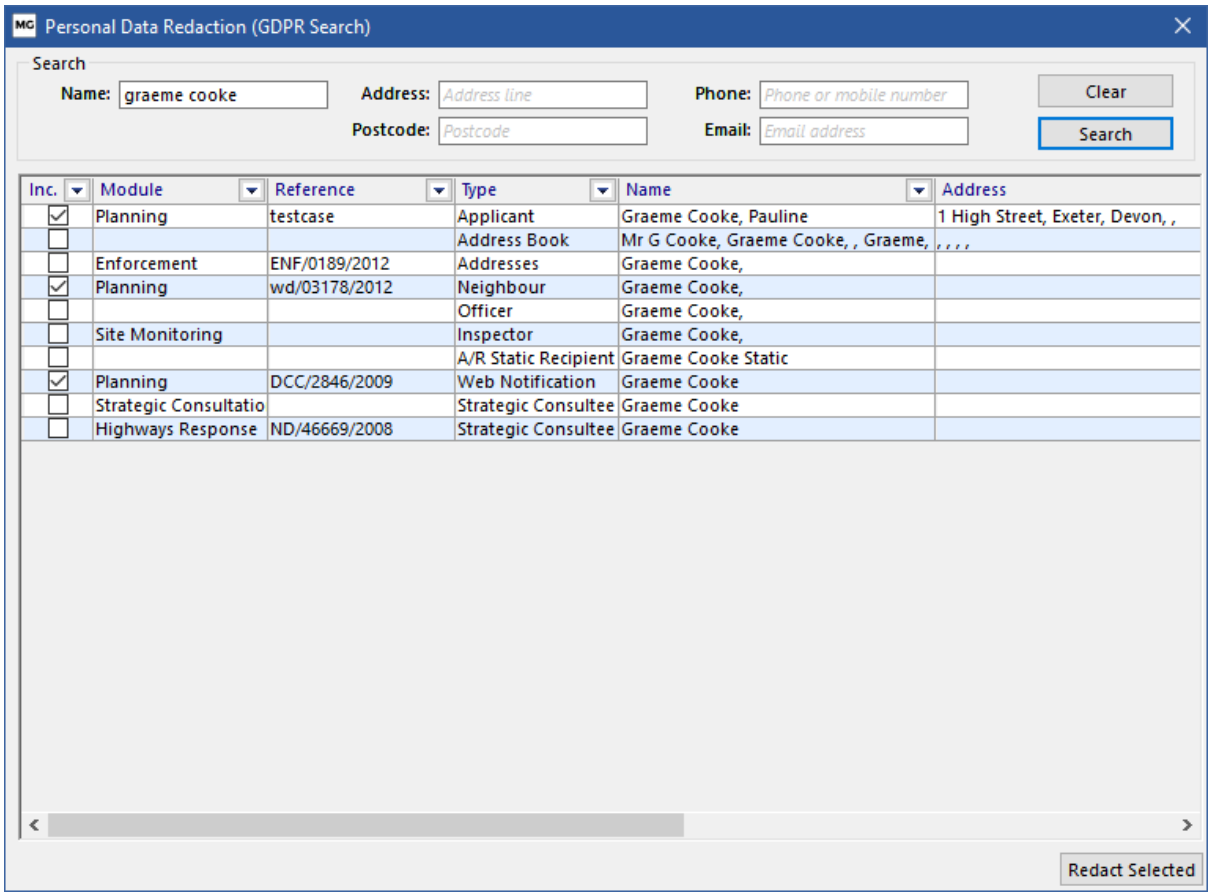


GDPR

DEF are fully compliant with the requirements of the Data Protection Act (DPA) http://www.ico.org.uk/, SCC Data Protection Policy and Information Security Policy.

In addition DEF are also registered with the Information Commissioner's Office. DEF's ICO registration is ZA178256.

The system has a built-in GDPR redaction tool which allows users to search all personably identifiable fields have the data within them redacted. The tool provides search tools for name, address, postcode, phone and email. Matching results are displayed to the user so they can select which are to be redacted. DEF are also developing a retention service which will automatically remove data and documents based on council rules. This would allow the system to automatically remove neighbours after a set time for example.



The system also benefits from a rule-based retention tool that allows users to remove, or redact, data within the system. The authority defines rules which to process the data based on a timescale in line with their retention policies. In addition to processing data, the system can also remove documents as part of its processing. Users can choose to have the data / documents processed automatically or put into a holding queue to be approved by an officer.

Finally, DEF have an anonymization tool to remove personal data, including names, emails addresses, phone numbers etc., from all databases not deemed necessary to deliver the requirement. These include test or training environments.

Under the GDPR DEF will be a data processor whilst the Council will be the data controller. DEF are fully aware of the obligations required of data processors under GDPR.

Hosting

The service offered by DEF is essentially a managed hosted service running in a Microsoft Azure environment. The Microsoft Azure location is used is UK South. The platform is routinely patched by Microsoft. In addition, they will provide all anti-virus and anti-malware support. In April 2013, the data centre was given clearance from the UK government to handle data classified as IL2 (Impact Level 2), which can include personal information.

The solution would be accessed using an HTML5 compliant web browser. This requires no components to be installed locally by the Council. This is a Windows application and as such far more responsive than a web application. It is deployed over the internet and fully available to remote and mobile workers alike. GIS integration is provided using WMS and WFS services between DEF and the Councils cloud spatial system. Integration with the Gazetteer would be via web services or scheduled DTF data uploads.

Users authenticate with a user and password followed by a six digit MFA code provided by an authenticator app such as Microsoft Authenticator. During first login the system will prompt the user to setup multi factor authentication.

All data is backed up utilising Druva cloud backup solution ensuring that all data that changes is backed up, but also previous backups are kept for a period of 30 days. SQL Databases are backed up in a crash consistent state so that they may recover full databases including transaction logs. The Backups are kept in the Druva Cloud Architecture with access only permitted by DEF Software listed personnel. Backups and restores are tested on a bimonthly basis, to ensure full recovery possible.

Backup Strategy is to back-up the MasterGov Application Servers every 24 hours.

Document store is backed up every 1 hour.

SQL Server has full backup taken nightly and transaction log backups taken every 15 minutes.

Hosted App Servers have an RPO of 24 hours RTO of 4 Hours. SQL Servers have an RPO of 24 Hours with RTP 4 Hours.

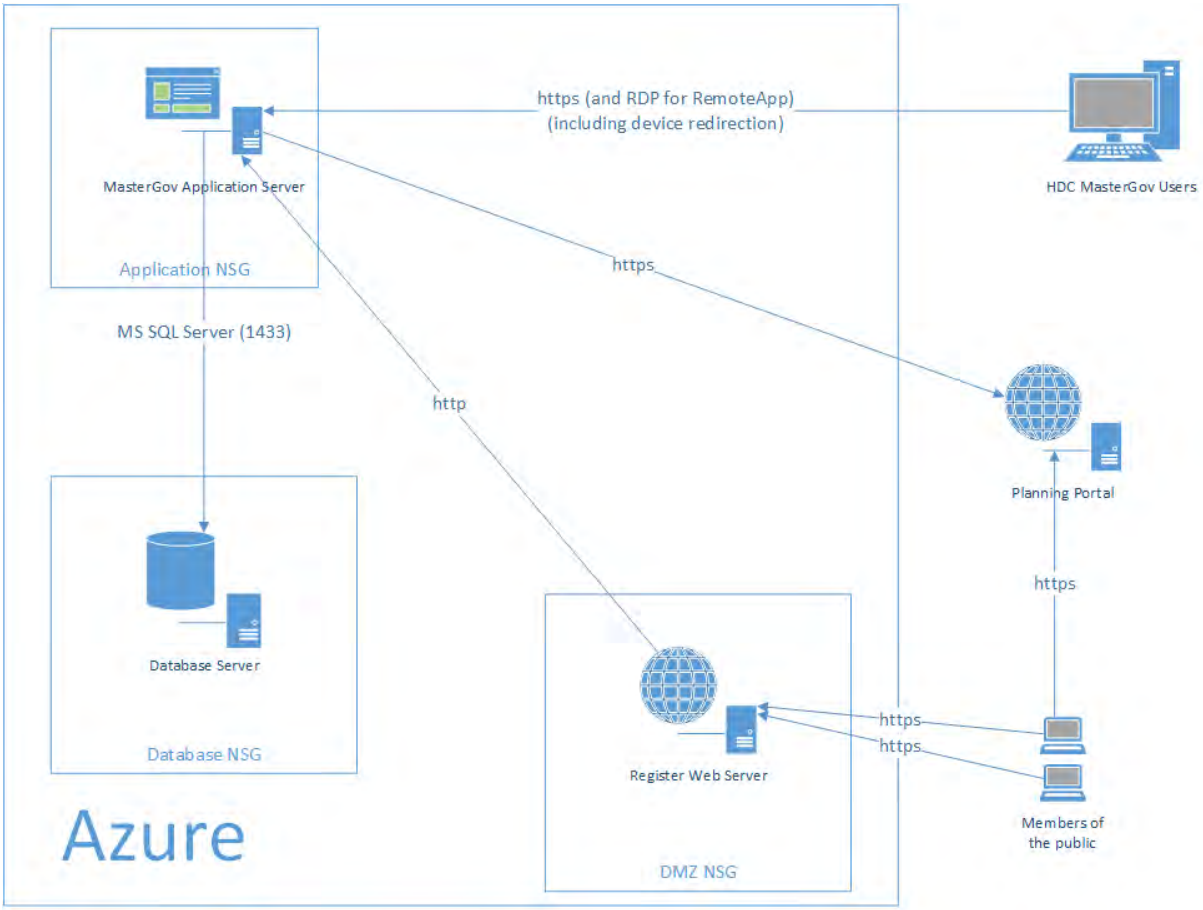
If a server fails, backups can be recovered using the Azure Portal. All backups are encrypted using the keys provided by Microsoft Azure. Disks are encrypted at rest using the Microsoft Azure encryption. DEF uses the Microsoft UK South data centre. Backups are kept for 30 days as standard, but this can be extended at no charge if required.

In addition, DEF also have a separate offline backup strategy for the DMS. This is to ensure that individual files can be restored without having to resort to a full database restore.

DEF place no backup or housekeeping on the Authority. This is a fully managed solution.
The typical bandwidth requirement for the hosted solution is 2Mb.

By default, customers receive 500GB of HDD storage. Additional storage can be purchased annually.

The solution has a guaranteed availability of 99.9%



The data centre is ISO 27001 certified. Access to the Microsoft Azure Portal is restricted to DEF Software personnel logins only. Access to the MasterGov client (live and test) is controlled by IP address and 2FA. 2 Factor authentication is provided using Microsoft's Authenticator app. Only traffic originating on IP addresses from the councils' LAN are allowed to access the system in the first place. All other external IP's other than DEF Software are silently blocked by both the Azure Network Security Group and DEF's stateful firewall.

In addition to Microsoft Azure NSG's and DEF stateful firewall that block access to all IP addresses except whitelisted Council ones the system has intrusion detection provided by Microsoft's Azure Security Centre. The DEF stateful Firewall, which includes the same rules for network access, runs an open-source intrusion detection system called Snort. All protection against attacks affecting system integrity, availability and confidentiality is provided by Microsoft as part of their Azure platform.

To secure the environment DEF block access to the Windows command prompt and Start button. Additionally, AppLocker is used to prevent any executables from running other than the whitelisted ones for the whole domain.

The only passwords used are domain passwords stored in Microsoft AD using standard Windows security and safeguards. DEF Software do not regularly require users to change passwords since this is shown to be an insecure method as recommended by the National Cyber Security Centre: https://www.ncsc.gov.uk/blog-post/problems-forcing-regular-password-expiry.

If the Council requires passwords to expire then DEF can implement this as a Windows policy for Council users. If a password is forgotten, then the designated MasterGov council admin user should contact the support desk to ask for a new password for the user. This password will be changed and sent directly to the user's email address only. Authorised council staff have no access to create user accounts.

Other than the password expiry as described above, all other points are covered by the domain controller's policy already. In addition, more than 5 unsuccessful login attempts will lock the account for five minutes, preventing brute force attacks.

Successful login/logout, unsuccessful login/logout are captured by the Windows domain server event log. Successful login attempts are recorded by MasterGov into a table within the MasterGov database. The IP address and PC name is recorded in the login table. The login table can be exported on request from the database. Users do not have access to this table through the MasterGov interface.

No privileged system changes are allowed within the software. Accounts can only be created by DEF Software and the requests for new accounts must be logged on the support desk.

DEF do not conduct network and application tests themselves but do encourage customers to conduct their own independent vulnerability assessments. Microsoft of course conduct regular Azure platform tests.

DEF do conduct internal and external audits on regularly basis and can provide results to customers on request. Any issues discovered are relayed to tenants irrespective of data loss.

Data Migration

To implement MasterGov for the Council DEF will have to migrate the incumbent data for data and the document management system. This will include any associated metadata.

The seven phases below set out what DEF will do and how they will achieve it.

Phase 1: Pre-Migration Planning

It is imperative that a pre-migration impact assessment be completed prior to commencement to ensure that the migration is viable. Such an impact assessment will verify the quality of data. The assessment will initially be carried out by DEF Software during the tender phase based upon known factors such as incumbent vendor, database formats and the volume of data expected. The impact assessment will then updated where applicable upon contract award.

Timescales for the migration will be estimated by DEF Software using metrics gathered from a number of MasterGov migrations. From the timescales a cost for the migration will be layered into the overall project cost. Again this will be done during the tender phase. A contingency will also be built in at this stage to compensate for the somewhat fluid nature of customer data.

Phase 2: Project Initiation

In order to migrate the Council's data DEF Software will require either CSV data extract files from each table being migrated or a SQL Server BAK file. These files do not need to transformed and can be outputted by a DBA in an 'as is' format.

In the case of the documents DEF will require CSV extracts of indexation so that this can be loaded into DEF MasterGov. In addition, DEF require the Council to extract the files to disk so that they can be uploaded to DEF's hosted environment.

The expectation is that any spatial layer data would be sent to DEF in the form of Web Feature Services (WFS) from a hosted spatial cloud or Council back office.

Once DEF have sight of the incumbent data an accurate timeline can be established and the project plan updated. Project initiation will also be the time to ensure that DEF have access to any legacy datasets that have to be migrated.

The act of extracting incumbent data will not result in any disruption to live running.

The Council should only have to extract data and spatial layers at the beginning of the project and again ahead of go live. It may be possible to delay the document extract until after the data is migrated. If the Council are able to produce a 'delta' of changed documents from IODX DMS then this can be processed as a change only extract.

Phase 3: Landscape Analysis

DEF, with the help of the Local Authority, will analyse existing data structures within the incumbent systems and develop a high level data mapping. This mapping will not be a complete source-to-target specification but it will identify high-level objects.

At this stage it may be applicable to refine the project timescales. The landscape phase allows DEF to determine the likely timescales based on data quality, complexity, resources available and technology constraints that will help determine the project timelines.

Phase 4: Solution Design

By the end of this phase DEF, working closely with the Council, will have created a detailed mapping design specification. This will document how the source and target objects will be mapped, down to attribute level. If the incumbent database contains fields that MasterGov does not, DEF Software will create new fields, in consultation with the Council. In turn these will be added to the appropriate screen in MasterGov. This design specification will be at a sufficient level to be passed to a developer for implementation in a data migration tool.

The Council will also have sight of the design specification and will be able to suggest changes. Ultimately this document will need to be approved by the Council.

At this stage DEF will also have a firm design for the configuration of their data migration tool (DMT). This configurable piece of software is capable of migrating data and documents from multiple sources. The DMT will be used to extract the data from legacy systems and to load the data into MasterGov. For example, some migrations require change data capture functionality so this will be designed and prototyped during this phase.

DEF will draw on their recent experience of converting Planning, Building Control and Land Charges from other systems and use their existing DMT configuration as the basis for the Council's migration. This will save time for DEF and the Council during this phase.

A data quality management specification will be created during this phase. This will define how DEF and the Council plan to manage the various data quality issues discovered during the landscape analysis phase. These may fall into certain categories such as:

- Ignore
- Cleanse in source
- Cleanse in staging process
- Cleanse in-flight using coding logic
- Cleanse on target

The migration tool will not explicitly attempt to match codes from the source dataset. Instead, the source data codes will be migrated to MasterGov as is. This ensures continuity for users of the software. Where this is not possible DEF will agree a code mapping with the Council. It is also possible to introduce additional mapping data sets to allow the Council to map values from an existing code to something new moving forward.

Any mandatory fields required by MasterGov will be checked during migration. These rules can be built into the migration tool or read directly from MasterGov's own mandatory field rules which are defined by the Council. Column type validation such as numeric, date and string are intrinsically checked during the migration.

Phase 5: Build & Test

The completed data migration tool configuration and tool will be shipped to the hosting platform to be executed by DEF Software staff.

It is advisable to test the migration with data from the production environment, not a smaller sample set. By expanding the test data sample, the DMT may run into conditions within the live data that cause a defect in the migration at runtime. These can then be recorded and managed by DEF so that the development team can rectify them.

The process to create and test the migration tool is an iterative one, where remedial changes will be incorporated into the DMT configuration until the migration is 100% accurate and accepted by the Council. In DEF's experience this has never surpassed three iterations prior to sign-off. Although different approaches are available DEF have found this iterative approach allows both the

development team and the Council the most flexibility. It certainly allows for work to begin on the migration tool whilst some facets of the mapping are being confirmed. Whenever the migration tool is ran the Council will have immediate access to the data for analysis.

Once the migration tool has been ran, the MasterGov system will contain all records from the incumbent database. All results, failure rates and test data from each iterative migration step will be shared with the Council via the Project Manager. Record counts and accuracy checks will be provided by DEF Software in an exception report however the Council will be able to carry their own independent analysis on the resulting data.

The migration tool will be ran by DEF system administrators and will show progress as well as a detailed output log on screen (with output to log file). Any records that have failed to migrate will be highlighted. The DMT also has an option to delete existing data so that multiple test runs are possible. In addition to simply highlighting “fall-outs” DEF’s migration tool allows the Council to access random extracts of data to compare the source with target datasets.

Often data migration exercises will have a fall-back policy. Given that the Council will not go live until the migration tool is signed off, no fall-back policy is required. That said, should the time taken to write the migration configuration jeopardise the project plan then the project manager will have to raise this as a project risk.

Phase 6: Execute & Validate

The final go live migration will occur on the eve of go live, where the tool is ran against the live incumbent datasets. This ensures that all data entered by the Council into their current systems will be transferred to the MasterGov system, with no repeat data entry required by the Council.

Documents supplied (whether all or a change only delta) will be loaded into the DEF document management system.

The spatial records associated with applications will need to be updated to hold DEF’s internal record number. DEF will work with the Councils’ GIS officers to accomplish this.

Following successful migration and go live DEF will ‘side load’ a copy of the live database into a test environment for the Council. DEF will ensure that the system is sanitised to remove references to live documents, templates and other live working folders. DEF Software have a data anonymiser that is ran against any test customer database which generates random example data for all personally identifiable data fields. This allows DEF to stay within the requirements of General Data Protection Act.

Final validation of the data produced in the go-live data migration is the responsibility of the Council.

Phase 7: Decommission and Monitor

Once the Council is happy with the resultant dataset in MasterGov they can retire the incumbent dataset. The MasterGov system will now be live and as such will have passed into its support and maintenance agreement. Any future issues reported will be the responsibility of DEF’s service desk provision.

Project Ethos

DEF Software Limited will use the implementation methodology for the Council that has proved to be successful with other authorities that have implemented MasterGov. This methodology has proven successful at customer sites, including recent go lives for West Northamptonshire Council, Dorset Council, South Hams & west Devon Councils and Westmorland Council.

Project Initiation

DEF delivers all projects within the PRINCE2 Project Management Framework, whilst utilising Microsoft Teams as a central document and control repository.

DEF will deliver the entire project under PRINCE2 methodology with a full-time Accredited Practitioner as Project Manager. The Project Initiation Document (PID) will establish the detailed business case alongside the schematic for functional delivery – it will be this document that drives the measures for project success. Outcomes from the Business Process Mapping (BPM) exercise will also feed into the PID.

PRINCE2 embodies established and proven best practice and governance for project management. It can be applied to any type of project. The method is widely recognised and understood, and therefore provides a common vocabulary for all project participants - promoting effective communication. The method also provides for the explicit recognition of project responsibilities - so that participants understand each other's roles and needs. There is a defined structure for accountability, delegation, authority and communication.

All projects managed using the PRINCE2 methodology should have a controlled start. The MasterGov implementation would begin with the completion of a Project Initiation Document and Project Plan. Risk Logs, Issue Logs and Quality Plans would be completed as part of this work.

An indicative project implementation plan has been supplied with this submission. See Appendix 1. Please note this project plan assumes that tasks requiring Council resource from within the business will be performed at a rate of two days per week.

System Familiarisation

Following Project Initiation, it is recommended that an instance of MasterGov is made available to the Council as soon as possible. Once the software is available DEF Software staff will provide familiarisation training and support. It is essential for Council staff to gain a good understanding of MasterGov and its full potential from the start of the project.

Phase 1 Training - User Introduction (Delivered prior to test system installation)

The Councils user base will be introduced to the DEF MasterGov software via 2-hour sessions with a maximum of 16 users per session. From experience, DEF find that not all systems users will have been involved in the system evaluation and contract award stages, so the software provided by DEF is often ‘unseen’ by some members of the team. These ‘User Introduction’ sessions not only allow those evaluation team members to re-engage with the software, but often introduces the system for the very first time to a number of users. These sessions will be run across 1 day in 2 hour blocks, with x3 blocks per day.

The aim of this User Introduction session is to:

- provide the Councils’ team with an overview of the user interface, such as searching, actions, reporting and processing

- provide users with an understanding of the system architecture and the flow of the data, inclusive of how and where modules interact (touch points)
- familiarise users with the 'system possibilities' and how the software can be best applied to their individual areas of work
- walk through the functionality and the end-to-end planning process, inclusive of web based components
- ensure full inclusion from the very beginning, therefore supporting user acceptance and increasing the impact of early adoption

The 'User Introduction' sessions will be led by the DEF Software training team but will allow for questions to be posed by the Councils' users. At the close of the session, the Users will:

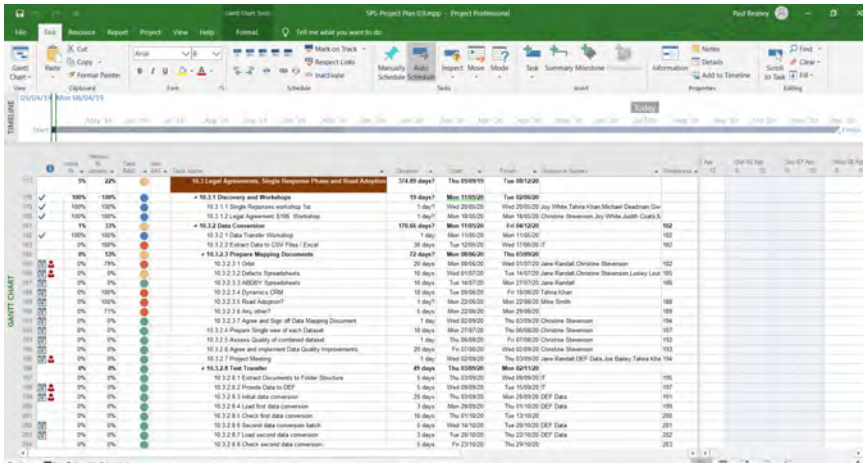
- be issued with a system architecture diagram, showing the system make up
- be issued with a copy of the project implementation GANTT chart
- be issued with a list of all modules/functionality included within the project
- be issued with initial user guidance notes
- asked to sign Part 1 of their unique training record

Project Analysis & Planning

Once the project is initiated it is important to define the scope and approach in more detail, particularly regarding business process redesign, data migration and interfaces.

The training strategy and plan and data cleansing plan should also be prepared at this stage. The hardware and software required to run MasterGov should also be defined and ordered at this stage.

A communication strategy to deliver effective communications on system implementation and business change should also be prepared at this stage. All staff impacted by the move to MasterGov should be updated on project process and the status of delivery and milestones reached.



Business Requirements & Process Redesign

The business requirements phase is designed to allow operational staff and management to define in detail their requirements of the system and project. This includes the local business process requirements, the data migration requirements, the interfaces and reports needed.
Ideally the hardware and software will be delivered and deployed in this phase.

In addition, this phase should be used to define the requirements for the public facing aspect of the MasterGov solution. These requirements should include an overview of what pages are required and how the look and feel of the website is to be achieved.

System Specification

The business requirements now need to be analysed to ensure that they fit within the scope of the project. Any additional system development needs to be scoped and added to the programme of work.

For data migration a detailed technical specification of the migration, describing the source data, how it will be migrated and to where in MasterGov will be produced. This process will inevitably require some input from staff to enable accurate mapping of source data.

Where applicable, similar technical specifications will be produced for the system interfaces and report requirements.

It is also important to begin to plan the system testing at this phase and to start the work on scripts. DEF Software can provide template scripts but the Local Authority may wish to change these to better match their process requirements.

The training staff and training rooms required should also be identified and booked at this stage. It will also be important to consider the post-live support requirements and the training of 'super-users'. The Council should also consider a Transition plan from the legacy systems to MasterGov, and the post live support structure and communications.

Data Migration

Please see the Data Migration in this document.

System Building & Testing

The Council business processes will now be built into MasterGov and tested by the Project Team.

The data migration scripts will be written, and the first trial migrations and tests will begin in this phase.

Any Interfaces or new reports required should also be built in this phase.

At this stage of the project DEF Software will look to carry out detailed user familiarisation training to the staff responsible for user acceptance testing. This training will build upon the initial overview training and provide staff with the skills required to test and configure the MasterGov system. This would usually begin with process change workshops or training sessions, followed by system training on MasterGov itself.

Phase 2 Training - User Training Level 1 (Delivered following installation of test system)

Through User Training Level 1, the Councils' user base will be broken up into functional groups, with each training session delivered against specific tasks and roles. Each training session will cover full reporting in context.

User Training Level 1 is delivered against the phase 1 configuration of the test system, utilising the first iteration of the migrated Council data (supports user acceptance through recognisable data) as well as the Council's system configuration and module options. Standard documents and reports will be included within this build.

User Training Level 1 will be delivered in classroom style format, with a minimum of x1 trainers from DEF and a maximum of x8 users per session from the Councils. These sessions will follow the 'show, tell, do, check' methodology where each user will have individual access to the phase 1 test system via a PC/laptop. Each session will be accompanied by documentation including a learning outcomes

agenda, module specific training notes and a Part 2 signature sheet for their unique training record. Each session will follow the program of:

Show & Tell – The DEF training team will demonstrate the functional process on the projector screen 'front of classroom'. The demonstration will be at a slow and detailed pace, describing the reason, action and outcome of each task, as well as the flow of the data. The delivery will mirror the agreed working processes and will engage with the user in highlighting where the process remains identical, has changed from previous or has been newly introduced; thus helping understanding and acceptance when considered against the legacy system.

Do – The users will be set defined tasks and outcomes to work through via a hand-out document (learning outcomes agenda), which will follow the process they have just been shown front of classroom.

Check - The DEF trainers will move around each user, answering questions and offering guidance and support. Through this exercise, the DEF training team are able to note those users who require more input and close mentoring in order to gain the strongest return from the system. This exercise also highlights those users at a more advanced level who can offer peer support where required.

On completion of the session, both the user and the DEF Software training leader will be required to 'sign off' the Part 2 signature sheet for their unique training record. Where either the user or the DEF training leader feels unable to sign-off as the level of knowledge and understanding attained is not at a stage that the user will be able to continue training within the test system unaccompanied, then that session cannot be closed for that individual user. In this instance, DEF Software will deliver up to 3 more training sessions for that user(s) at no additional cost to the Councils.

The aim of this User Training Level 1 session is to:

- impart specific, detailed knowledge to the user base that is relevant and applicable to their specific role and function
- ensure the user has a complete, end-to-end understanding of the tasks, processes and workflow associated with each module and function examined within the session
- allow the user to recognise enhancements to the business processes and test the efficiency of any new aspects
- empower the user to be able to test the system thoroughly prior to go-live
- identify any individual knowledge gaps and plan/deliver follow through training sessions where required
- deliver detailed training materials modelled against the actual system configuration and workflow
- sign-off user understanding and capability within the training record

MasterGov Configuration

In order to begin user acceptance testing there are number of configuration and setup tasks to be completed. These include, but are not limited to, the following:

- Folder structure setup
- Lookup table population (for those not migrated)
- Letter template creation
- Number mask creation
- 1APP interface configuration
- GIS project and interface configuration

User Acceptance Testing

Once MasterGov has been configured and tested and successful data migrations run, operational staff can begin their own tests and assessment of the new system. At this stage DEF's expectation would be that only minor changes to the migration scripts or configuration would be needed.

Users will be able to apply the skills learned during phase 2 training to test every facet of the system. At this stage it should be possible to carry out a full end to end life cycle test of MasterGov, the GIS connector and the public facing components.

Phase 3 – User Training Level 2 (Delivered in the week prior to go-live)

User Level Training 2 is in place to ensure:

- training is delivered against any iterative changes made to the software between UTL 1 and the UTL 2 session final version
- users have a full understanding of the final software version prior to go-live and are individually empowered to use all of its components
- all configuration elements, security and access models, reporting, workflow and eGov are fully functional
- the penultimate data conversion is fully operational
- readdress any gaps in knowledge and ensure each user is able to generate efficient outcomes and a productive return from the application
- refresh any areas of potential ambiguity and reconfirm the set business processes and best practice
- sign-off user understanding and capability within the training record

Through User Training Level 2, the Council's user base will once again be broken up into functional groups, with each training session delivered against specific tasks and roles.

Go Live

Go Live will follow the switching off of the incumbent systems, the migration of data into MasterGov, the post migration configuration changes and a final round of testing. The Go Live phase usually takes place over a weekend with the final 'switch on' first thing on the Monday morning. To minimise disruption to live running DEF suggest the Local Authority switch their incumbent databases to read-only on the day of go live migration. As such users will no longer be able to input new data but the systems will be available to answer queries. The whole go live process should cause no more than one working day of disruption although some authorities extend this for additional final UAT.

DEF Software's support team will have block booked time in for the go live, dedicated to the project, to ensure that 'switch on' goes as expected. As such resource will be at hand to resolve any configuration or training issues that might arise. In the unlikely event that such issues cannot be resolved remotely then a product consultant will attend site.

Following successful go live DEF will back up the live MasterGov database so that it can be used as the basis for a new test environment. This will be actioned by DEF staff.

Council Resource Requirements

To implement the project the Council will have to provide the required resource at the appropriate times. Below are the types of resource required and what will be expected of them. The figures quoted are worst case scenario and are expressed in people days. Each section can have one more than one person involved if required.

Database DBA

One of the first tasks that the authority will undertake is that of extracting the data out of the incumbent database so that it can be sent to DEF. This should be in such a way that it is repeatable for go live. This can be in the form of individual CSV files although the simplest solution is to send a database BAK file. DEF suggest that this task could take up to 5 days depending upon the method used.

Network Infrastructure

The Councils will need to ensure that the users on the Councils' network can reach DEF's hosted environment. This will include providing IP address ranges and if applicable making firewall rules. DEF suggest that this task could take up to 2 days.

Desktop Deployment Administrator

If the RemoteApp client is to be used instead of simply using an HTML5 compliant browser then the client would need to be deployed. This task should take no longer than 1 day.

GIS Officer

The GIS officer will be required to provide spatial layers to DEF and, if applicable consume, DEF's WFS web services. The GIS officer is required to facilitate available layers and build a MasterGov/GIS configuration file. This task should take between 3 and 5 days depending upon hosting type.

LLPG Custodian

The LLPG custodian is required to assist DEF with the setup of the Gazetteer link. This may be a live database connection or done via DEF's own DTF importer. This resource requires minimal input and should not require more than 1 day.

System Administrator

DEF suggest that a system administrator resource be part of the project team as they will have significant involvement throughout the project. This resource will be responsible for creating master templates, setting up auxiliary lookups (that aren't migrated), general system configuration and assisting with UAT.

This resource could be come from IT or the business but it should be people that know the current process and software. They should be reasonably IT literate and ideally have some basic SQL understanding however this is not essential. This resource has the most work during implementation with an estimated 30 person days being required.

Power User

This resource could be absorbed by the System Administrator role but essentially the power user resource is required for UAT of MasterGov, data / document migration the public facing web front end and the GIS element. Duration of UAT can be very subjective but DEF believe that UAT can be achieved in 20 days.

Project Manager

The Councils will be required to provide an internal project manager to manage internal resource. This resource will work closely with DEF's own project management to ensure the smooth running of the project. An implementation project of this magnitude should only require the project manager for half a day per week.

Web Team Administrator

As DEF build the public facing elements of the system a resource will be required to either provide a master page that can be harvested from the Councils' CMS or the necessary mark-up and CSS to build a page to the authority's look and feel. This input should equate to no more than 2 days.

End Users

Finally end users are required for end user training. End user training is expressed as 'Phase 3 – Full User Training' in the project plan. Some users are required for a day whilst others for only half a day.

System Support & Account Management

System Upgrades

System Upgrades are issued on an 'as required' basis as defined by the Councils, however typically customers are encouraged to adopt an upgrade between two and three times a year. If a customer does not wish to receive a new build DEF will not force the upgrade, although customers are encouraged to upgrade within 18 months of their last upgrade at the very latest.

Upgrades issued under the maintenance agreement are free of charge. DEF are continually updating the system, allowing enhancements as well as legislative and statutory changes to be provided free of charge. Each software build is delivered with a comprehensive set of tailored notes detailing all changes made to the system since the last build. If a release is deemed to be major, then an implementation plan may be required.

Since each system has some council specific modifications, users are encouraged to install to a test environment and run the functionality before making the additions live. DEF software has a comprehensive testing policy, but this does not match the council's specific settings and infrastructure. Database upgrades are included as part of the software. The MasterGov software will check the version of the database against the shipped version of the software and will automatically upgrade the database when the user is logged in with sufficient privileges to do so.

Once a software release has been user acceptance tested in the test environment it can be transferred to the live. In practice an average MasterGov build should not take longer than 20 minutes to deploy. This greatly reduces down time and allows users to maximise their productivity.

Enhancements adding significant functionality will be quoted at a fixed price before any work is carried out. The council will then receive all free of charge modifications as part of the new software sent out.

System Patches

From time to time the MasterGov system may need to be patched to resolve issues that do not warrant a full new release or where timescales do not allow for a new release to be deployed and fully tested.

In these cases, a new release will be issued but it will be a copy of the current release with the exception of any additional fixes or features. A full set of system files is sent to ensure compatibility and to ensure that additional issues are not introduced.

The patch release will not be compiled from DEF Software's current live code base. Instead, the software will be compiled using the code based which was used for the original build. As such only agreed additional changes will be included in the patch. This ensures that user testing is kept to a minimum.

Support and Maintenance

The DEF Software Service Support model adopts the most beneficial elements of ITIL v3 Service Management Practices. DEF operates a 'vision-policy-plan-action' strategy for service management which is reflected in our 2-part service management program.

Account Management – The Local Authority will be assigned an Account Manager. The Account Manager is the primary owner of client requirements (via the Service Desk), excluding immediate service support requirements.

Service Support Model – The DEF service model allows the Local Authority team members to deal directly with the System Development Team. DEF don't believe that 1st /2nd/3rd Tier support models deliver value to the customer as this places barriers in front of resolution. With DEF, the Local Authority user base will deal directly with the DEF development team, opening up the support model and giving the straightest possible line of access.

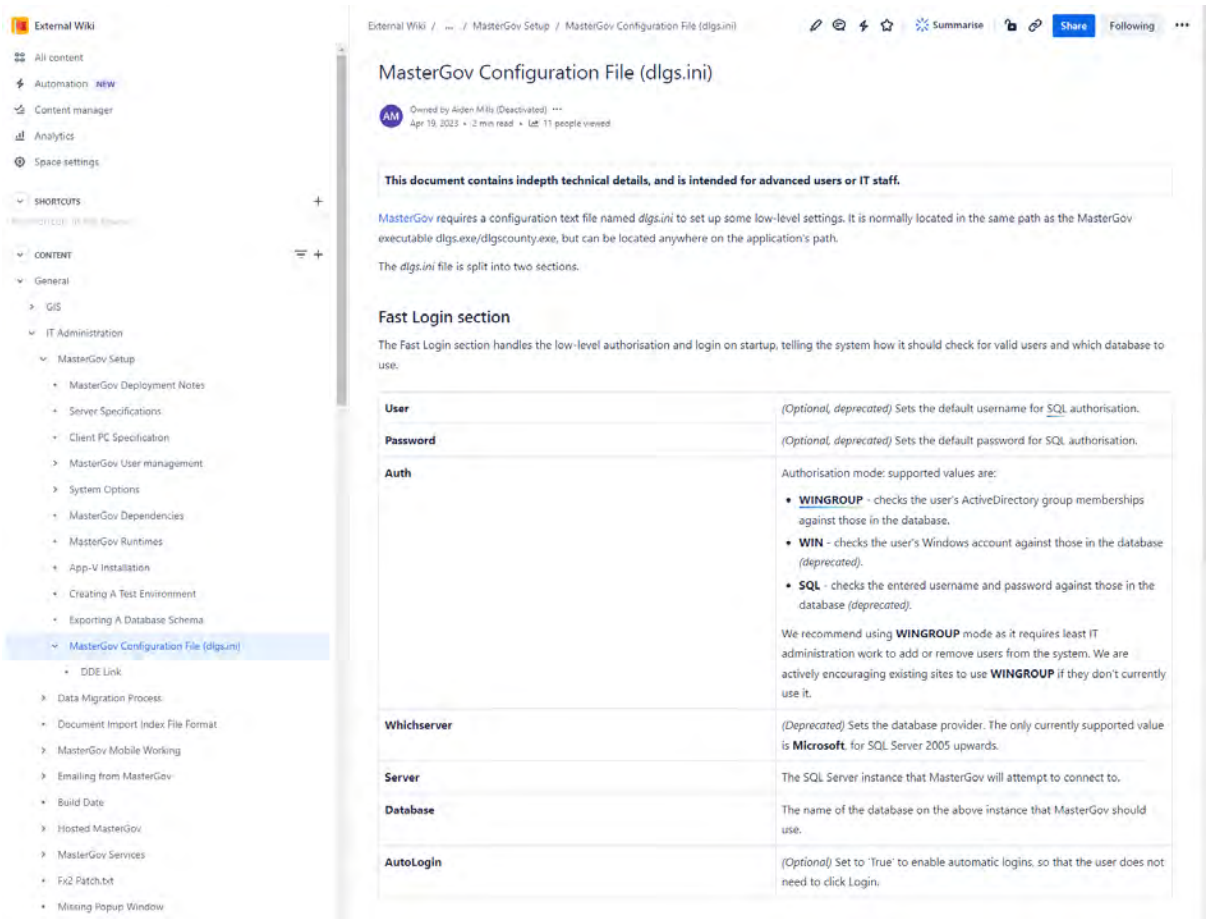
Against the agreed SLA, the DEF service support team will provide issue resolution and fault diagnosis; problem resolution; 'how to' support; system and software updates; statutory changes to software; release documentation and training notes; system upgrades (builds); statutory and legislative changes. The Service Support team also generates a weekly activity client report regarding tickets and activity, which is reviewed and dissected with the relevant Account Manager at the Monday morning meeting. Through this report, the Account Manager has absolute visibility of all issues, requests and communication.

Support tickets can be logged via telephone, email or secure web portal. At the time of writing, supports statistics for the 12-months prior to and including 26/06/2020 are: 6% of developer capacity against support; zero support calls beyond 30-days; 48% of support calls closed within 4-working hours; 67% of support calls closed within 8-working hours; 93% of all support calls closed within 48-working hours. Support will be made available via the published helpdesk telephone contact routes and will be available: Monday-Friday, 9am – 5pm UK working hours, excluding UK Bank Holidays.

Full details are available in DEF Software's standard Service Level Agreement which can be obtained on request.

User Guides

All training materials will be provided via access to DEF's online Wiki.



All of DEF's support literature is provided in an online Wiki which is accessible from within MasterGov. This repository of system information is kept up to date and is full searchable. The Councils' can even have an account to record council process notes alongside MasterGov reference material.

User Groups

DEF hosts one User Groups (UG) per annum at client sites. These user groups are hybrid so users can join on Microsoft Teams.

The standard format of the User Group is to examine:

- Highlight the developments of a particular Council and examine where and how they have achieved efficiency
- Discuss best practice and what more the products could do
- Review statutory and legislative updates
- Demonstrate functionality, review and discuss R&D program
- Prioritise R&D
- Discuss outcomes from Steering Groups

The User Group is provided at zero cost to all clients. DEF Software covers all charges associated with room hire and catering at the Council.

As mentioned above DEF also actively encourage steering groups' to scope new products and discuss enhancements to existing software. These groups usually consist of between 2 and 5 Local Authorities. DEF fully project manage these groups and publish outcomes using their Basecamp online project area. The Basecamp system is also used by customers as an open forum to discuss legislation changes and best practice. All customers have access to the Basecamp system.

Account Management

Account management is another way in which DEF Software keep an active dialogue with their customer base. The DEF Account Manager will visit site for one full day per annum at no cost. The Account Manager will deliver within that consultancy day against a prioritised agenda as instructed from the Council. For example, if the customer wishes to have training delivered to new starters, then DEF will deliver at zero cost within those days. Alternatively, if the customer would like to utilise the time for on-site report writing, then DEF shall deliver against that requirement.

Also, whilst on-site, the DEF Account Manager will talk through in detail the items and functionality on the R&D release list. This ensures the Council are fully aware of all advancements in the software and are able to select for test and install those functions that prove beneficial to them.

Road Map

Since its incorporation in 2009 following a management buyout from Datawright Computer Services, DEF Software Limited has strived to not only impose itself as a strong local authority partner but to do so in a way that positively sets it aside from other vendors in the market.

In the past ten years DEF has grown sustainably both in terms of customer numbers, staff and turnover. In that time DEF have won 29 contracts for full systems which was bolstered in March 2014 by the addition of 15 Welsh policy software customers following DEF's successful acquisition of Penn'orth Research. In that time many other existing customers committed to long term software renewals.

DEF are an owner managed business with no debt and a very strong business model. The business model is centred on a number of 'do's and don'ts' which defines everything the company does.

DEF's plan for the next 5 years is to build upon the hard work done since 2009 by adding new pro-active customers, recruiting more development staff and increasing the product portfolio.

In the past 12 months DEF have completed their Travel Plans module, significantly upgraded Building Control, developed a connector for the Planning Portal's new JSON technology, written a brand new NSIP module, added biodiversity net gain functionality to Planning and Application Response, upgraded their hosting to provide a true desktop experience and converted MasterGov to a fully 64-bit platform.

Within the next 5 years DEF intend to expand on Policy Monitoring to better support English Councils, deliver a brand-new planning register platform, add new functionality to the Jotter mobile working system and add support for the Building Safety Levy.

The business has also committed to developing a web-based replacement for the MasterGov suite. This four- year project has already begun with a dedicated team in place. The finished product will replace MasterGov and provide a true web application deployment with platform independence. The anticipated delivery date for this solution is Q2 2025.

Outside of the committed software development, DEF retain additional development capacity to be able to react to the changing requirements of the market. This allows the company to commit resources to projects which are not yet anticipated but which will become apparent in the coming years. These requirements come out of user groups, steering groups and changes to legislation.

DEF's programme of continued improvement encompasses new features that directly benefit customers in addition to internal changes which improve the way the software is developed and deployed. An example of this was a total re-write of the licensing engine which. This change made it easier for system admin users to deploy new builds and enable new features.

To facilitate growth DEF will continue to focus on new business in terms of building relationships and responding to ITTs and will continue to work closely with the Crown Commercial Services. A major part of the DEF ethos however is to ensure that existing customers are managed with the same focus and energy that goes into new business. DEF believe in long term relationships with customer retention paramount to growth. This is reflected in the number of long-term customers DEF have. An excellent service model has underpinned DEF's delivery from day one and this will continue long into the future.

DEF has significantly grown its development team since 2009 and will continue to aggressively grow this side of the business. DEF are a developer centric organisation with over 80% of the staff being software developers. This balance allows the company to continue to add and improve the products. DEF have a policy of always recruiting better to ensure that their skills mix is constantly improved.

As a business, DEF's first contract was won in 1984 (as Datawright) and DEF have retained this customer to this day. Local Authority is DEF Software's only market space and it is their sole focus. DEF have no plans to change and will continue to work closely with the market to develop software for Councils around Planning, Building Control, Land Charges, Highways and Public Protection.