nalc

Publications

Digital mapping systems for local council management

National Association of Local Councils

www.nalc.gov.uk

Published by the National Association of Local Councils (NALC)

109 Great Russell Street
London
WC1B 3LD

020 7637 1865
nalc@nalc.gov.uk
www.nalc.gov.uk

Unless otherwise indicated, the copyright of the material in this publication is owned by NALC. Reproduction and alteration in whole or part of the digital mapping systems for local council management is not permitted without prior consent from NALC.

If you require a licence to use NALC materials in a way that is not hereby permitted or which is restricted by the Copyright, Designs and Patents Act 1988, then contact NALC. Subject to written permission being given, NALC may attach conditions to the licence.

Please note that this publication does not constitute legal advice. If in doubt, you should seek specialist advice in relation to your specific circumstances. The contents of this publication are for general information purposes only. Whilst NALC endeavours to ensure that the information contained herein is correct at the time of production, no warranty, express or implied, is given as to its accuracy, and NALC does not accept any liability for error or omission. NALC shall not be liable for any damage or loss or problems arising from the use of, or inability to use, this content or any material contained within it or from any action or decision taken as a result of using this site or any such material.

© NALC 2022. All rights reserved.

CONTENTS

Introduction 3

Digital mapping checklist 4

Implementation examples 7

INTRODUCTION

The management of a local council is a highly geographic task. People live, work, shop and play in geographic locations and an area's successful development requires a deep understanding of its geography. This is why page four of the Digital Mapping Toolkit states: "Maps and mapping technology should be part of the standard toolkit for every local council – alongside email, word processing, spreadsheets and accounts."

Despite its importance, many councils still need to use maps or mapping technology effectively, even though there are now good tools available to take on the growing challenges of council management, including devolution, climate change, energy efficiency, neighbourhood planning and resilience.

This document provides a checklist of the primary things every council should be able to do using the vast array of digital mapping data freely available. Councils are encouraged to use the checklist to identify the gaps in their current use of digital maps. Because most councils need to be made aware of the potential benefits of digital mapping, identifying the gaps can be the most challenging step.

The second section of this document is the checklist, and the third section illustrates how Parish Online supports the fulfilment of the checklist requirements. Parish Online is not the only digital mapping system available, over 1,900 councils already use it, and it is the only web-based system specifically designed for council use. Therefore, NALC recommends that every council consider Parish Online as an option.

DIGITAL MAPPING CHECKLIST

This section outlines the mapping capabilities that we think every council requires to perform its functions efficiently and effectively. NALC recommends that you use this checklist to highlight areas where your council may be missing an opportunity to perform more effectively.

National and district layers

There are many national layers available free of charge to all councils, including Ordnance Survey MasterMap and Address Base, Aerial Photography of Great Britain (APGB) (including Digital Terrain/Surface Models), Natural England (AONBs, Ancient Woodland, SSSIs etc.), English Heritage (Listed Buildings etc.), Land Registry polygons, Environment Agency flood data, British Geological Survey, and many others.

Q1) Can you access up-to-date versions of all the national layers in the same mapping environment (so that they can be overlaid and compared)?

Q2) Can the clerk and all the councillors access the national layers from any computer?

As well as national layers, there will be many district layers maintained by your principal authority (for instance, the Local Plan, bus routes and timetables, Tree Preservation Orders, grit bins etc.). Although some of these district layers may be available on the principal authority website, they are often in a non-mapping format, preventing them from being overlaid onto other layers (national or district).

Note: The term district layers include maps from the county, unitary authority, or another non-national organisation such as National Park or Utility Group.

Q3) Can you access district layers in your digital mapping system so that they can be overlaid onto national layers or your own plans and assets (for instance your Neighbourhood Plan)?

How to use national and district layers

Once available in a digital mapping system, it is important that the national and district Layers can be analysed and manipulated.

Q4) Can you perform the following basic operations on your national and local layers?

- Search
- Pan/Zoom
- Measure distances and areas
- Overlay any number of national and district Layers in the same view
- Access any metadata available (such as data for each specific address in OS Address Point)

Creating your own council layers

The most important feature of a digital mapping system is that is allows a council to create any number of its own council layers.

Q5) Can you create your own council layers by?

- Specifying the data to be collected (e.g. for a playground equipment map this might include type of equipment, date installed, cost, frequency of inspection and date of last inspection)
- Styling the map layer so that it is easy to interpret (e.g. playground equipment might be styled to show swings, slides and climbing frames in different colours/symbols)
- Specifying which council staff can add data to the map (e.g. to record the installation of a new playground swing)
- Recording change history (who made the latest changes and on what date)

Associated data

An essential attribute of a digital mapping system is the ability to associate documents (including photographs) with objects in a council layer. For instance, for a playground swing, it is very useful to associate a photograph of the swing with details of the maintenance agreement and maintenance reports. This ensures that any councillor has access to all the information about the swing, even if the councillor responsible is away on holiday.

Q6) Can you attach associated documents (including photographs) to any object in a council layer?

Creating and communicating plans, asset registers and reports

Once all the council layers have been loaded into the digital mapping system, the council can develop and maintain its own plans, asset registers and reports. This may involve exporting structured maps and data from the digital mapping system into non-mapping formats such as pdf documents, emails, and interactive maps on the council website. For the sake of simplicity, the questions below address just a few specific examples of the fundamental processes required.

Q7) When developing a neighbourhood plan, can you (for example):

- Create a housing development layer that can be compared against other relevant information kept in other layers (e.g. the District Local Plan, relevant constraints such as SPAs, SSSIs, Natural England habitats and Parish Assets of Community Value)?
- Extract 'views' from the Housing Development layer which can be inserted into the Neighbourhood Plan document, overlaid with other data, and marked up with labels and symbols as required?
- Publish the Housing Development layer as an interactive map, for use during a public consultation and, over time, for showing progress on implementation?

Q8) Insurance Asset Register. Can you extract an Asset Register for your insurance company showing the location, installation date, purchase price, replacement price and maintenance status of all your assets?

Q9) Reports. Can you use your digital mapping system to exchange data (in both directions) with your principal authority on matters of common interest such as fly tipping, graffiti, road closures (both planned and unplanned) etc?

Security and robustness

The data in an effective council digital mapping system is a vital asset that must be protected from loss and inappropriate use. The digital mapping system also contains a growing wealth of historical data, which will allow trends to be analysed.

Q10) Is your digital mapping data secure and robust? In particular:

- Is your data stored in a professionally maintained robust environment with adequate back-up facilities so that there are no single points of failure?
- If data is corrupted (accidentally or maliciously) can you revert to a previous version of the system?
- Is all the data in your system available to all councillors and staff (on a need-to-know basis) so data cannot be lost if, say, the clerk leaves?

Access to digital maps

An essential benefit of a digital mapping system is that it can be sub-licensed to organisations or individuals working on behalf of the council (for instance, mapping hedgerows or trees for a neighbourhood or climate plan). This has attracted new (and often younger) people to take an active interest in local government.

> Q11) Can you provide access to your digital mapping system to allow bona fide organisations and individuals to help you map data such as trees and hedgerows?

IMPLEMENTATION EXAMPLES

Readers unfamiliar with digital mapping may find it challenging to follow some checklist questions in section two. This section provides illustrations from Parish Online, which it is hoped will help to explain the concepts.

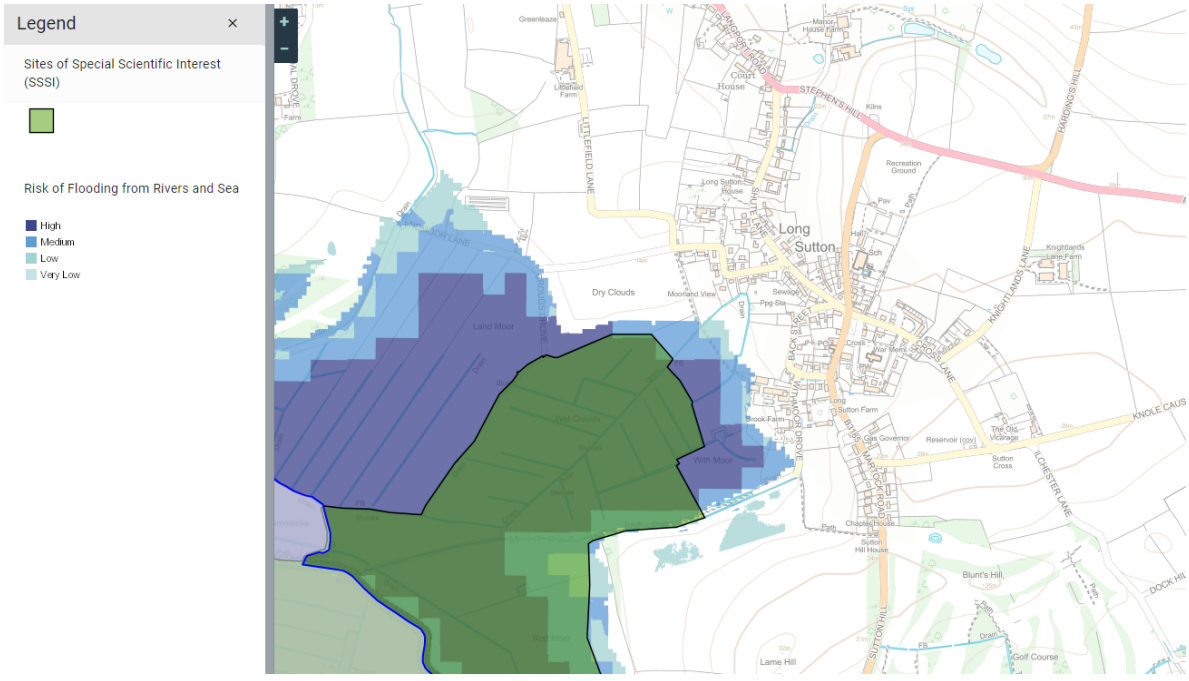

Fig 1: Overlaying multiple National Layers (Q1). In this example, MasterMap is used as a backdrop for Sites of Special Scientific Interest (SSSIs) and Flood Risk. The system provides a legend as well. Any clerk, councillor or authorised external user can overlay data in this way from any computer (Q2 and Q9).

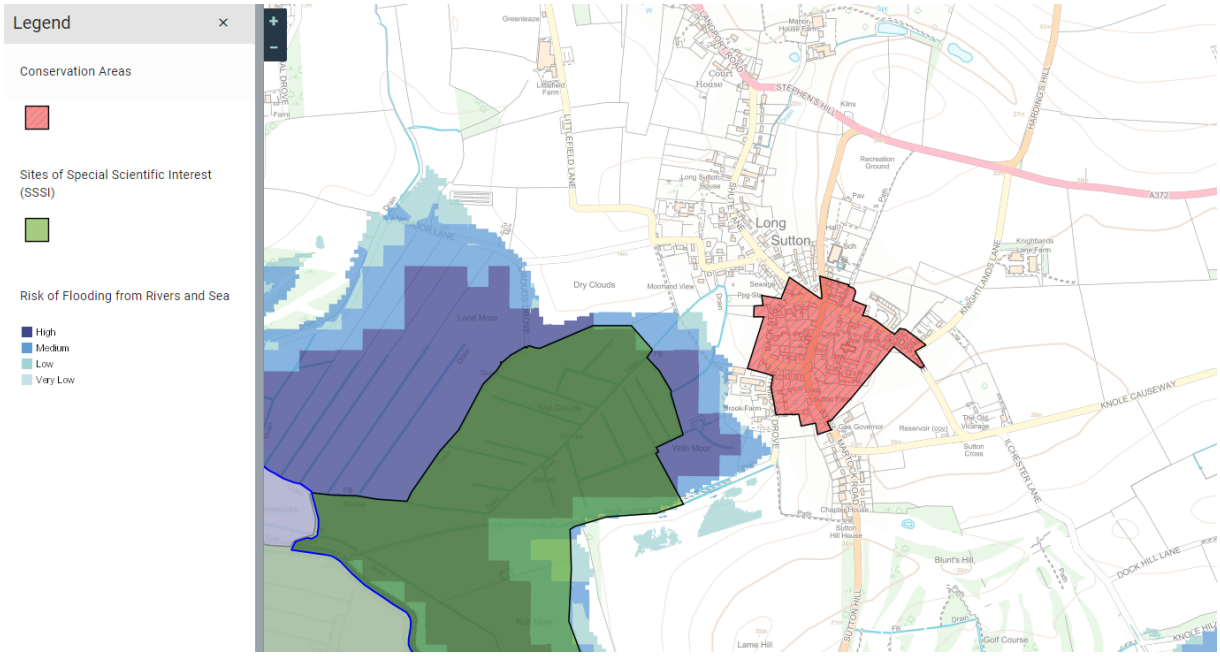

Fig 2: Access to District Layers (Q3). Somerset County Conservation Areas have now been added to the map to analyse (for instance) constraints on a planning application. Combining National Layers and District Layers in this way requires a digital mapping system.

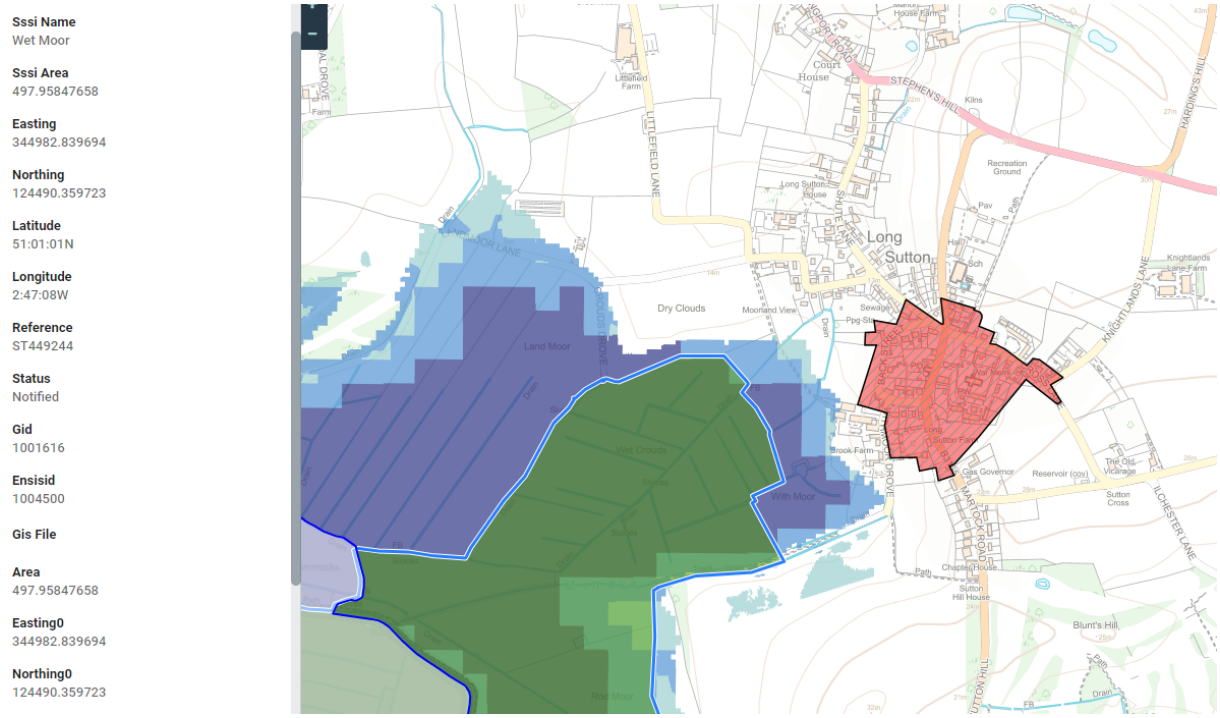

Fig 3: Access to information about objects (Q4). Data about the SSSI can be accessed – it is called Wet Moor, and its status is 'Notified'.

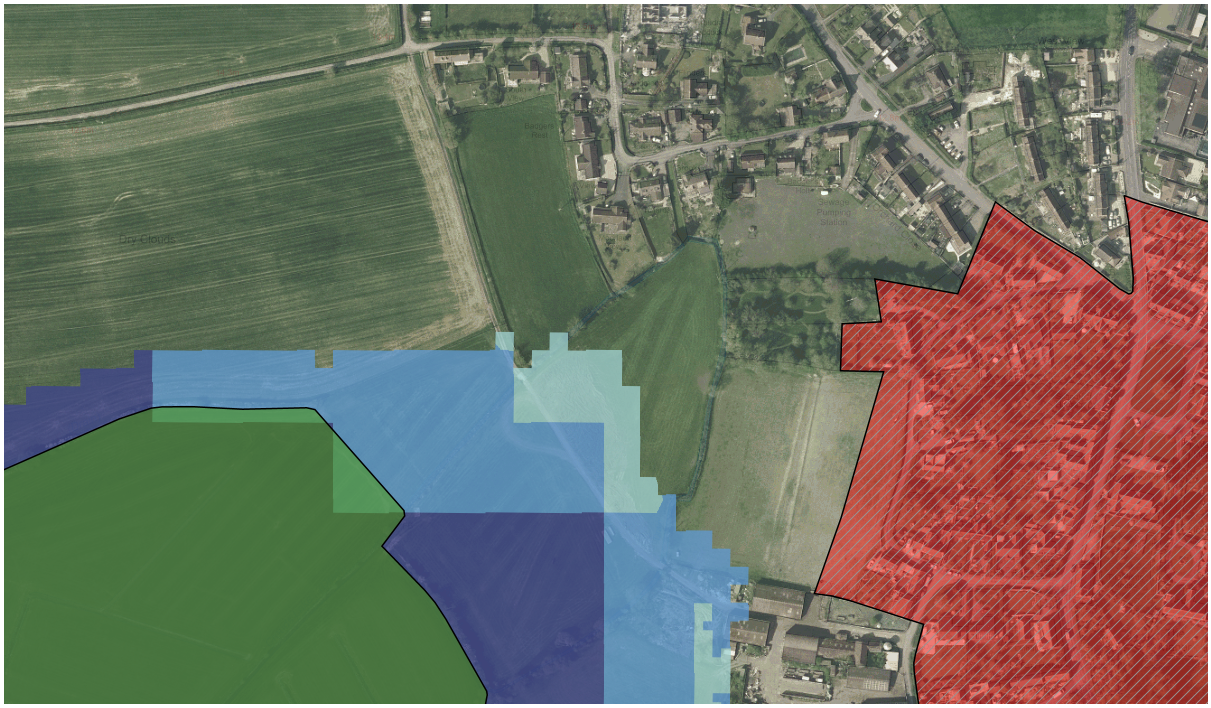

Fig 4: Data layers can be viewed against MasterMap or other background data such as aerial photography (in this case APGB). Aerial photography is very useful for identifying land use and vegetation.

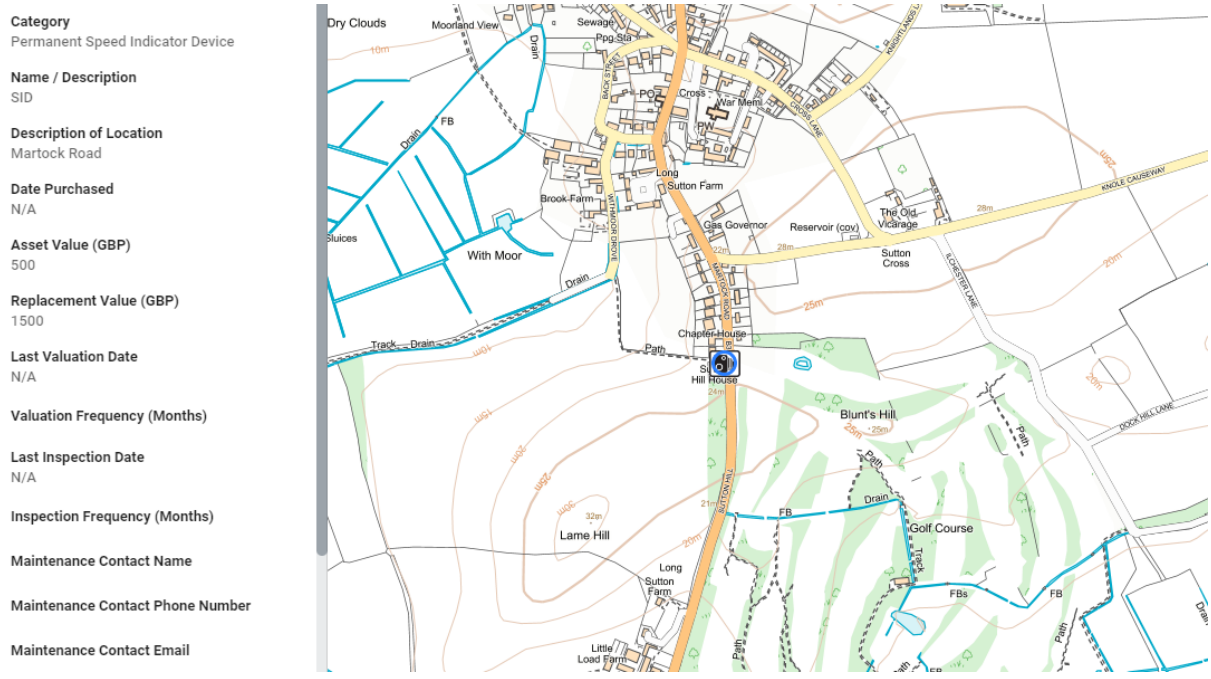

Fig 5: Creating Council Layers (Q5). This is from a street furniture layer in which different types of street furniture have different symbols (in this case, a camera). The council has specified the data to be collected (shown in the table on the left).

Fig 6: Creation and maintenance of metadata (Q5). The author and the date of each data entry are recorded automatically.

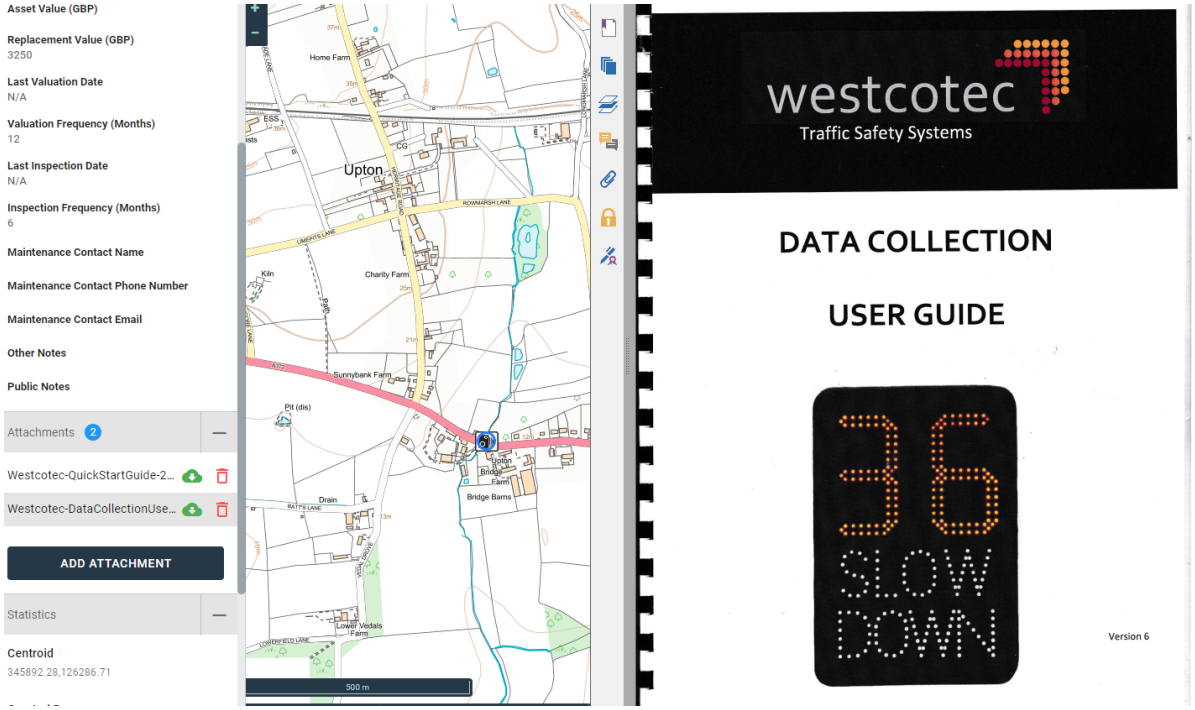

Fig 7: Attachments (Q6). Two user guides have been added to the speed indicator camera object. This means that any councillor can find out how to operate the system.

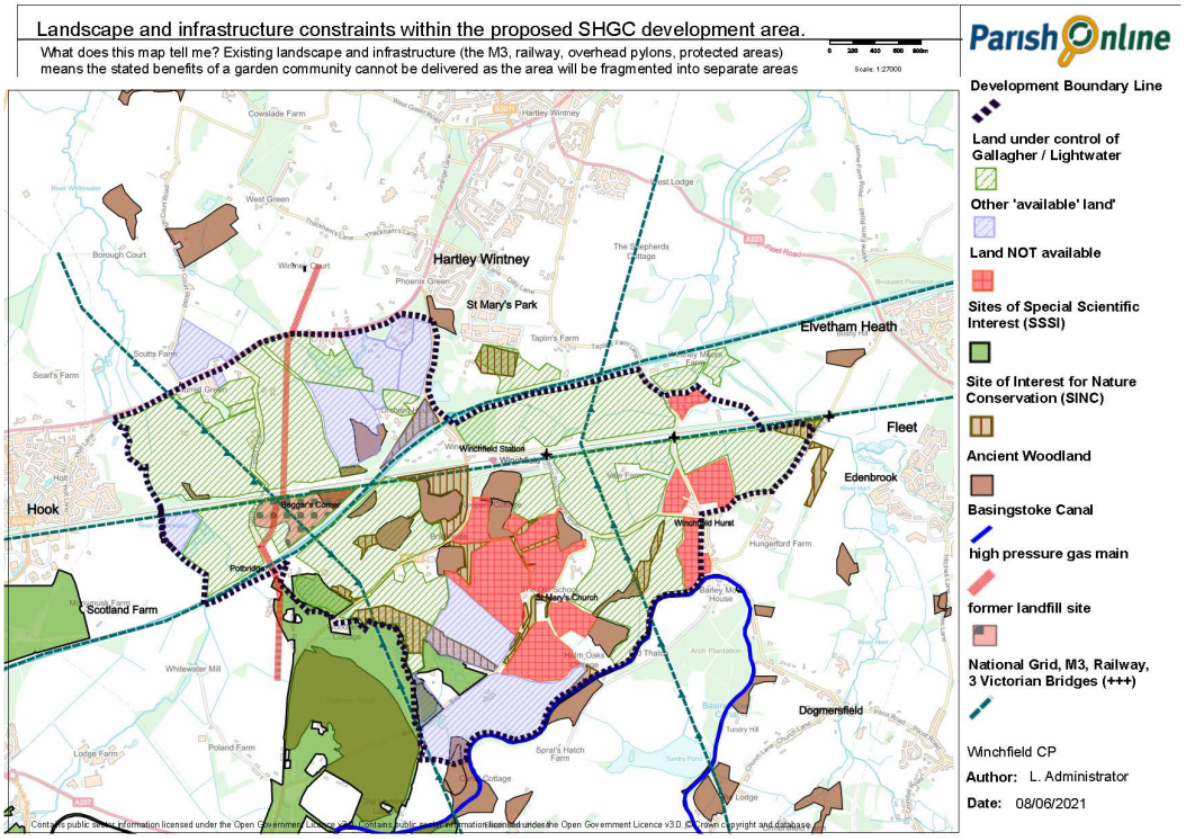

Fig 8: Developing Plans (Q7). This is an example of a map to support public consultation on a Neighbourhood Plan revision. The map has been exported into a Neighbourhood Plan revision document available from the council's website. The map was also displayed at a public meeting.