

**CROWMARSH PARISH  
NEIGHBOURHOOD PLAN  
LANDSCAPE SURVEY AND  
IMPACT ASSESSMENT –  
CROWMARSH GIFFORD**



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<b>Introduction and background</b>	<b>3</b>
<b>CR03</b>	<b>8</b>
<b>CR04</b>	<b>10</b>
<b>Concluding statement</b>	<b>12</b>
<b>Supporting references</b>	<b>13</b>

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## INTRODUCTION AND BACKGROUND

A neighbourhood plan, for example, the Crowmarsh Parish Neighbourhood Plan, must meet certain Basic Conditions. A key condition is that the plan ‘does not breach, and is otherwise compatible with, EU obligations’. One of these obligations is Directive 2001/42/EC ‘on the assessment of the effects of certain plans and programmes on the environment’. This is often referred to as the Strategic Environmental Assessment (SEA) Directive. The SEA Directive ‘seeks to provide a high level of protection of the environment by integrating environmental considerations into the process of preparing plans and programmes’. The SEA Directive is transposed into UK law through the Environmental Assessment of Plans and Programmes Regulations (the ‘SEA Regulations’) and it is these regulations that the Crowmarsh Parish Neighbourhood Plan needs to be compatible with.

The Environmental Assessment of Plans and Programmes Regulations require the likely effects on the environment of implementing a development proposal to be identified, described and evaluated. The information to be given includes:

The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

The SEA comprises ‘Documentation of the state of the environment’ to provide a baseline on which to base judgements, and ‘Determination of the likely environmental impacts’ usually in terms of direction of change rather than firm figures. There follows consultation with the public and the application of the findings to influence decision taking and implementation of any monitoring that maybe required.

The current assessment provides a baseline description of the fauna and flora recorded at sites allocated for employment use, sites CRO3 and CRO4. As no land is allocated for housing in the Plan, none of the other candidate sites, all of which were previously considered for housing allocation, are assessed. The assessment focusses on six aspects required by the Environmental Assessment of Plans and Programmes Regulations: biodiversity, fauna, flora, soil, water and cultural heritage and landscape. Because of the limited scale of the study area the other four factors, population, human health, climatic factors and material assets, have not been taken into consideration. Any change in direction of availability of habitat due to development is irreversible, flood risk hazard may be mitigated by engineering.

Relative impact is ranked as low, moderate or high/severe as a measure of both environmental impact on habitat and flood risk hazard. Development of sites ranked as high/severe impact in either or both categories suggests that a site should not be a priority for development. Development of sites with moderate impact in either or both categories suggests that development is feasible provided that mitigation measures are put in place, while development of those sites ranked relatively low impact are better suited for development. The final choice of development sites depends on a matrix of other non-environmental factors; the results of this survey will feed into that matrix.

A number of potential sites have been considered for housing or employment use development by the Planning Department at the South Oxfordshire District Council (Figure 1, Table 1). These allocations, SHLAA and SHELAA, are presented in the Emerging Local Plan 2034).

Table 1 Sites considered for development within the SHLAA and SHELAA exercises

Site	Area (ha)	Landscape capacity (No of dwellings)	Inside AONB or proximity to it	Flood Zone category
CRO1	0.93	15	Inside	1
CRO2	24.9	450	Adjacent	1, 2, 3
CRO3	9.9	105 or industrial units	Outside 790 m	1, 2, 3
CRO4	2.51	50	Outside 440 m	1, 2
CRO5	2.34	*	Inside	1
CRO6	2.52	65	Inside	1
CRO7	6.44	70	Inside	1
CRO8	3.32	80	Inside	1
CRO9	7.69	140	Inside	1
CRO10	8.19	*	Inside	1

\*development not recommended (SODC Planning Department) – no capacity assessment made

The two employment use sites (CR03 and CR04) were surveyed during winter 2017/2018 and their individual landscape character, the flora and fauna hosted within each site, flood risk and soil type were described, along with records of heritage and archaeology. The impact on the environment has been assessed on a rational and consistent basis to determine if site development would be relatively harmful at one end of the scale or would have little relative impact at the other. The likely flood risk hazard of developing each site is also assessed: surface water flooding from the Environment Agency flood risk hazard zonation and groundwater flooding from shallow depth to water table in prolonged wet periods and the likely impact of SUDS (sustainable urban drainage system).

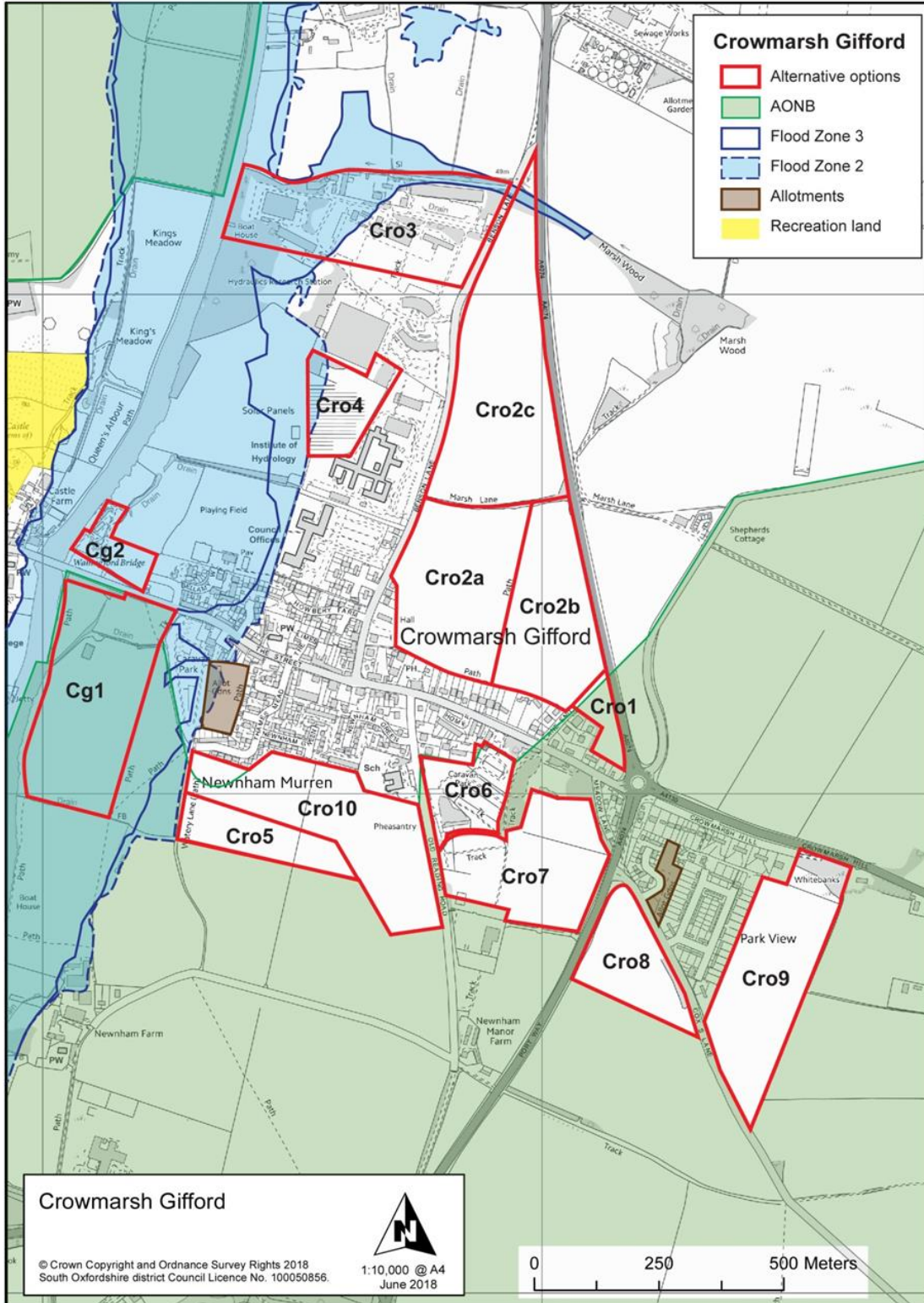


Figure 1 Sites CRO1 to CRO10 previously considered for housing or industrial development

A landscape character assessment of some of the sites adjacent to Crowmarsh Gifford was carried out in 2015 and provides valuable supporting evidence to the Plan (see <http://www.southoxon.gov.uk/services-and-advice/planning-and-building/planning-policy/evidence-studies> ). A landscape character assessment was carried out in 2017 for the Local plan 2033 [http://www.southoxon.gov.uk/ccm/support/dynamic\\_serve.jsp?ID=788092192&CODE=4650A3652852911819269B1BB795E501](http://www.southoxon.gov.uk/ccm/support/dynamic_serve.jsp?ID=788092192&CODE=4650A3652852911819269B1BB795E501) .

Surface water flooding in Crowmarsh Parish is almost entirely due to the River Thames, and its various feeder streams, flooding overbank in prolonged wet periods characteristic of the winter. Overbank flooding is exacerbated by groundwater upwelling from the foot of the Chilterns Chalk Aquifer and groundwater flooding occurs in CRO10 and other parts of Crowmarsh Gifford, while there is an ephemeral spring in the upper part of The Street.

New development sites are encouraged to incorporate a SUDS approach for hard standing and roof top drainage. This system passes runoff water directly to underground soakaways or surface pond features to slowly dissipate into the groundwater system. However, if the groundwater level is only a few tens of centimetres below ground level in the first instance, the consequent groundwater mounds around the soakaways and SUDS features may promote localised groundwater flooding.

## CR03

This is the northern part of Howbery Park, a partly built up industrial area including extensive car parking and some buildings on the northern perimeter in need of renovation.



CR03 Industrial development area, a part of CR03, Benson Lane and part of CR02 in left foreground [Howbery Park]

Topography and drainage: The site is essentially flat with a short steep slope down to the River Thames on the western perimeter and to Marsh Wood Stream on the northern perimeter. The western half of the site lies within Flood Zone 2. The site is drained to soakaways in the fluvial gravel floodplain of the Thames.

Soil: Made ground over development area, no virgin soil. Elsewhere good clayey soil over fluvial deposits.

Use: Howbery Park research establishments and Business Park.

Public access: The site is accessible to the wider public who are invited to share the staff catering facilities that are available at Howbery Manor. The restaurant overlooks attractive gardens in a rural setting.



Hedgerows: Beech hedge along Benson Lane.

Trees: The tree density increases toward the river and Marsh Wood stream. It comprises a good range of mixed deciduous and evergreen conifers with numerous willows near the river and some also along Marsh Wood Stream. There are also a variety of shrubs along the river and the stream including elder, holly and other indigenous varieties. Numerous specimen trees have also been planted in the park area.

Wildlife: Muntjac deer have been seen in Howbery Park and foxes prowl at night for scraps. Squirrels also forage for left overs. The bird life includes the common garden birds found in the area as well as pied wagtail, small owl, a protected species, wood pigeon, ring dove, crow and various riverside birds including heron and kingfisher. Protected species include bats, with adders likely along the Marsh Wood Stream area to the north.

Heritage: Howbery Park is an historical site first developed in the seventeenth century. There is a need to preserve the character of this history.

Overseen: The site is partly screened by trees and the roadside hedge along Benson Lane and from the south also by office buildings.

Other: This is a detached site from the residential area of the village and unlikely to be sanctioned for residential use. It is, however, an area that has been identified for additional industrial development.

Environmental impact of development: Development impact is small provided that new industrial units allow retention of trees and some green spaces to accommodate existing wildlife.

## CRO4

This is a small site behind the UK Centre for Ecology and Hydrology campus that is largely occupied by an unsightly solar panel array. However, it is screened from Benson Lane by the CEH buildings but can easily be seen from the river to the west.



CRO4, with rows of solar panels and minerals dump, mid-right, CRO3 to the upper left and the northern part of CRO2, the triangular freshly-sewn field, top right [Howbery Park]

Topography and drainage: This is an essentially flat site with the third terrace of the Thames situated along its western perimeter such that the extreme west of the site is in Flood Zone 2. It is otherwise self-draining to the fluvial gravels that underlie the site.

Soil: Good clayey soil over fluvial deposits.

Use: Solar panel farm and mineral dump for HR Wallingford. Bulk mineral material is periodically dumped on the northern part of the site, sorted and recycled for further use.

Public access: Private land, strictly no access to public.

Hedgerows: None.

Trees: Some mixed deciduous trees on adjacent land to the north.

Hedgerows: Young mixed hedge along eastern boundary.

Wildlife: The site and the grassland field to the west leading to the Thames have been used by nesting ospreys. However, since the solar panels were installed the ospreys have been displaced from the site. Foxes continue to frequent the area along with roe deer. The birdlife includes a variety of rural, urban and river loving species.

Heritage: None

Overseen: The site is not publically overseen other than from the river and a pathway open only during normal working hours.

Other: None.

Environmental impact of development: The site is not suitable for residential development due to its isolation from the village. It could be used for industrial development. As such the environmental impact would be minimal.

## **CONCLUDING STATEMENT**

The environmental impact of development sites, CR03 and CR04 is low.

## SUPPORTING REFERENCES

Landscape Capacity Assessment: Sites on the Edge of larger Villages of South Oxfordshire, Main Report 2015, Kirkham Landscape Planning Ltd and Terra Firma Consultancy <http://www.southoxon.gov.uk/services-and-advice/planning-and-building/planning-policy/evidence-studies>

Landscape Character Assessment for the local plan 2033, Lepus Consulting 2017 [http://www.southoxon.gov.uk/ccm/support/dynamic\\_serve.jsp?ID=788092192&CODE=4650A3652852911819269B1BB795E501](http://www.southoxon.gov.uk/ccm/support/dynamic_serve.jsp?ID=788092192&CODE=4650A3652852911819269B1BB795E501).

Groundwater and Crowmarsh Gifford. Report to Crowmarsh Parish Council 2011, British Geological Survey/Queen's University Belfast.