

Masterplan Development

29.06.15



Introduction

Purpose of the Masterplan Development document.



Google Earth

The Ministry of Defence (MOD) was charged with phasing out its military operations on the Graven Hill site in order to fund a project to provide logistics support on a sustainable platform for the future on a nearby site in Bicester ('C Site').

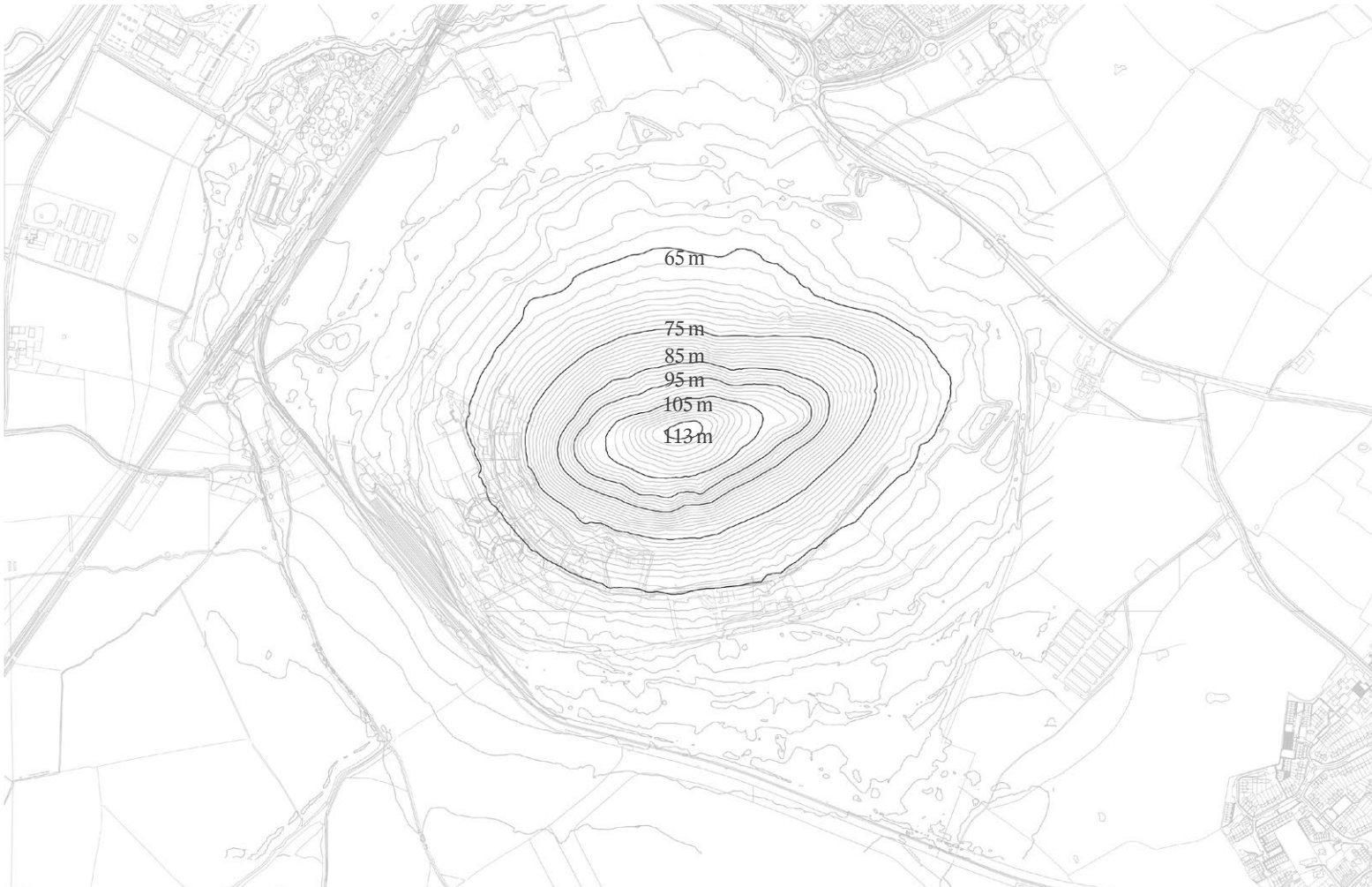
An initial masterplan for the Graven Hill site was produced for the DIO (Defence Infrastructure Organisation) by AMEC and submitted for outline planning in 2011.

This outline scheme included: residential development of approximately 1,900 homes, a new local centre with shops and a grocery store, a 2 F E primary school, community hall, a pub, sports pitches and pavilion, allotments, biodiversity improvements, 20,520m² industrial units, 66,980m² storage and distribution warehouses, and 62ha of accessible public open space.

Glenn Howells Architects were appointed in 2013, tasked with taking the original outline planning approved masterplan and developing it towards an amended outline planning scheme through to Reserved Matters Applications.

LEFT
Graven Hill Site

Topography



Topography is a significant feature of the site, with existing ground levels rising from 65m Above Ordnance Datum (AOD) along the northern boundary with the A41, up to 115m AOD at the top of Graven Hill at the centre of the site.

The gradient of the hill ranges from 1 in 30 at the base of the hill, to 1 in 10 at its steepest towards the top of the hill.

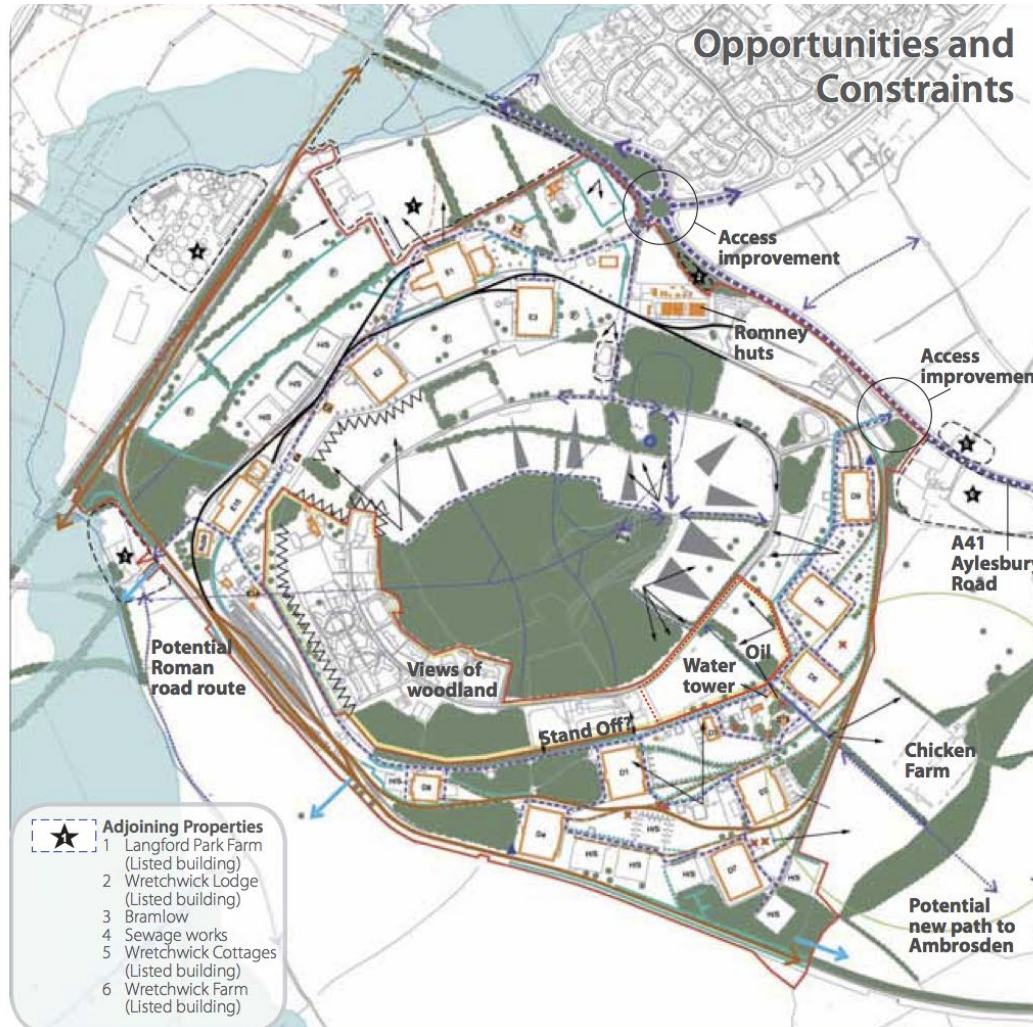
The site's topography creates a particular focal point for the layout of the proposed development.

LEFT
Graven Hill
Site Topography

Site Analysis

Overview of the Graven Hill site's key constraints and opportunities

- Based upon the Ordnance Survey Map with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright, Entec UK Ltd. AL 100001776
- Application site boundary
 - Safeguarded future expansion to St Davids Barracks
 - Views
 - Slopes (wider = steeper)
 - Flat area
 - Existing trees/woodland to be retained
 - Existing trees/woodland to be removed
 - Major road
 - Existing roads for possible re-use
 - Existing roads for possible walks
 - Buildings to be removed
 - Rail infrastructure to be retained
 - Rail infrastructure to be removed
 - Ditches to be retained
 - Ditches to be removed
 - Main outfall to be retained
 - Watercourse
 - Flood area
 - Retained Adjoining Military Site
 - Screening Required
 - H/S Hardstanding
 - 400m Sewage Works Offset
 - 400m stand-off
 - Potential Badger Set
 - Potential Badger Foraging



NOTE
This is an extract from the AMEC/DIO Design & Access Statement (09/11)

Opportunities

Retention and integration of significant existing landscape features, including large numbers of individual trees which are of high quality.

Excellent access to the A41 corridor and motorway network, and close proximity to Bicester Village and neighbouring developments.

The topography of the hill and landscape setting is able to provide a unique character area and strong landscape framework.

Constraints

The surrounding road network needs a number of improvements in order to improve capacity to enable the proposed developments.

St David Barracks located on the south west side of the hilltop is excluded from the site.

Presence of the nearby railway line north west of the site.

There are ecological constraints present, including habitats requiring integration as part of the protection of the site's biodiversity.

LEFT
AMEC - Opportunities and Constraints

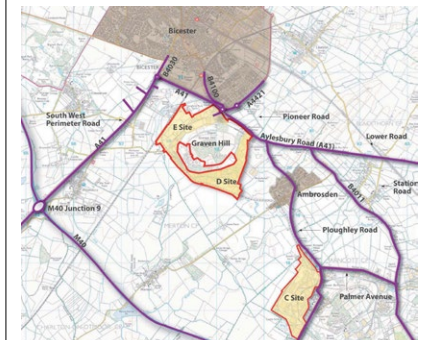
Phasing



The site has been divided into two phases due to the retention of the existing railway line which would still be in use by the Ministry of Defence (MoD) in the first Phase of development.

Access into the MOD Barracks is located at the North-Western point, where the route into the site would circulate along the railway lines in a clockwise motion.

The removal of railway lines as a result of Phase 1 allows for temporary access to the military buildings located in the second phase, which would later be removed and potentially be relocated to a nearby site which is accessible via the South-Eastern main railway line.

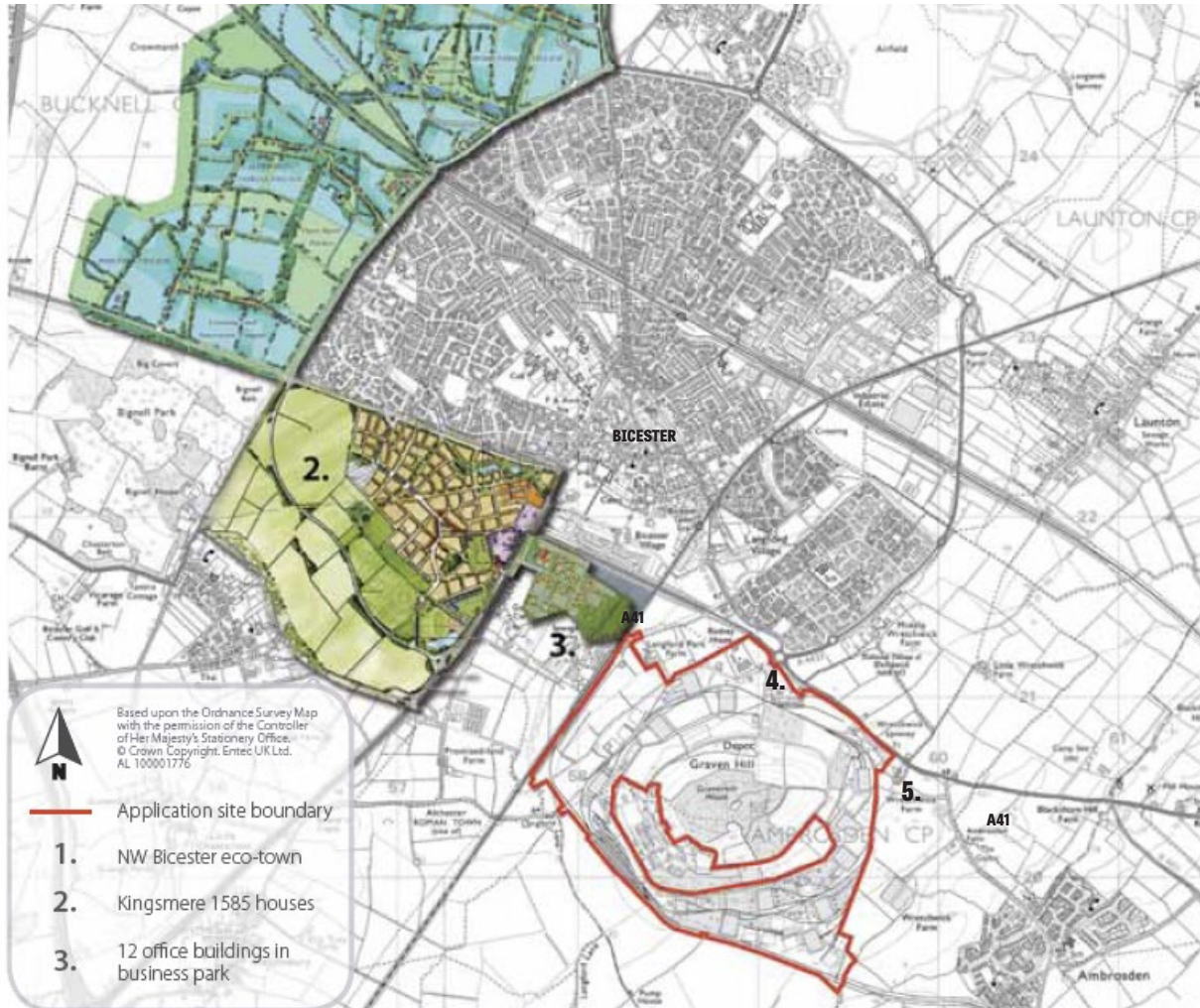


TOP
Wider context site plan (Source: AMEC/DIO)

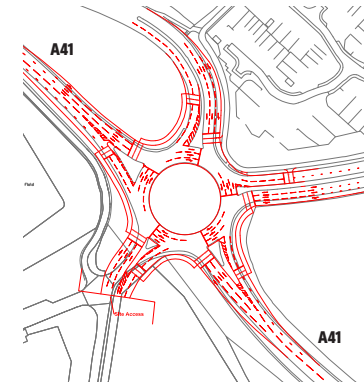
LEFT
Masterplan Land Transfer Phase 1 and Phase 2

Infrastructure

Roads, connections and routes.



NOTE
This is an extract from the AMEC/DIO Design & Access Statement (09/11)



Access to the site is currently via two locations on the northern edge onto the A41.

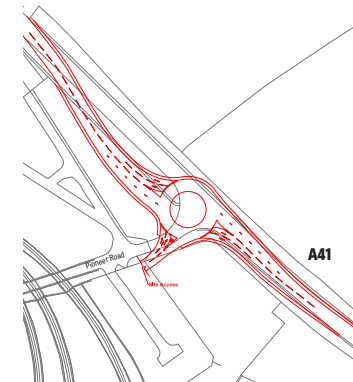
Rodney Roundabout:

Improvements to the five arm roundabout are proposed through widening to improve capacity and signalisation to improve the pedestrian environment and remove the severance currently caused by the A41.

Pioneer Road Junction:

It is proposed to upgrade the Pioneer Road junction to a roundabout to provide a secondary access to Graven Hill.

4. Rodney Roundabout



5. Pioneer Road Roundabout

TOP RIGHT
Retained Infrastructure

FAR LEFT
AMEC Site Plan - Relationship and connections with neighbouring developments

MoD

— Circular Railway

Tracks will be lifted & re-set into footways or re-invented to form elevated walkways.

●● Water Tanks

The water tower is a particularly evident feature of the existing site character.

▲ Concrete Plinths

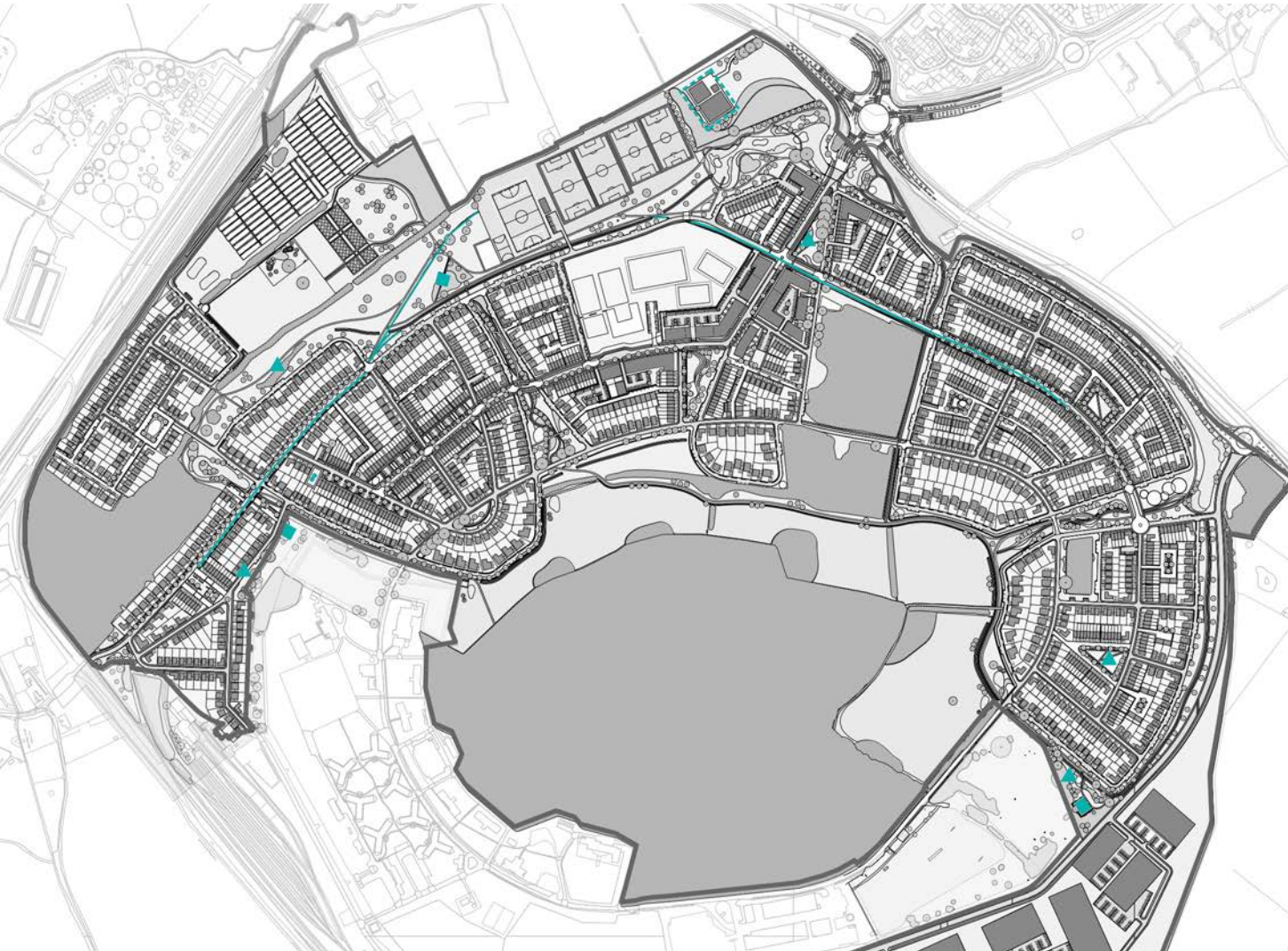
The retained service plinths will create a scattering of sculptural forms in the landscape.

■ Retention Ponds

A number of irrigation ponds will be converted for community uses &/ or landscape features.

--- Rodney House

Possible refurbishment of Rodney House & drill tower for social &/or sports uses.



The phasing out of MoD operations on the site creates numerous constraints on the form of development and accessibility in the first phase (Land Transfer Area 1).

For instance, there are a number of MoD buildings of substantial size which are required to be retained in the first phase of development. The majority of the MoD railway infrastructure is also required to be retained in LTA1, with the exception of a 120m length of track to be removed west of Westacott Road to allow access to the first phase of development.

Whilst there are many constraints associated with the MoD handover, the Graven Hill site includes a number of military features which are to be retained, re-used and re-imagined in the development of the site, reflecting the site's rich military history and providing interesting sculptures within the landscape.

LEFT
Ministry of Defence
Retained Structures

Existing Trees and Woodlands



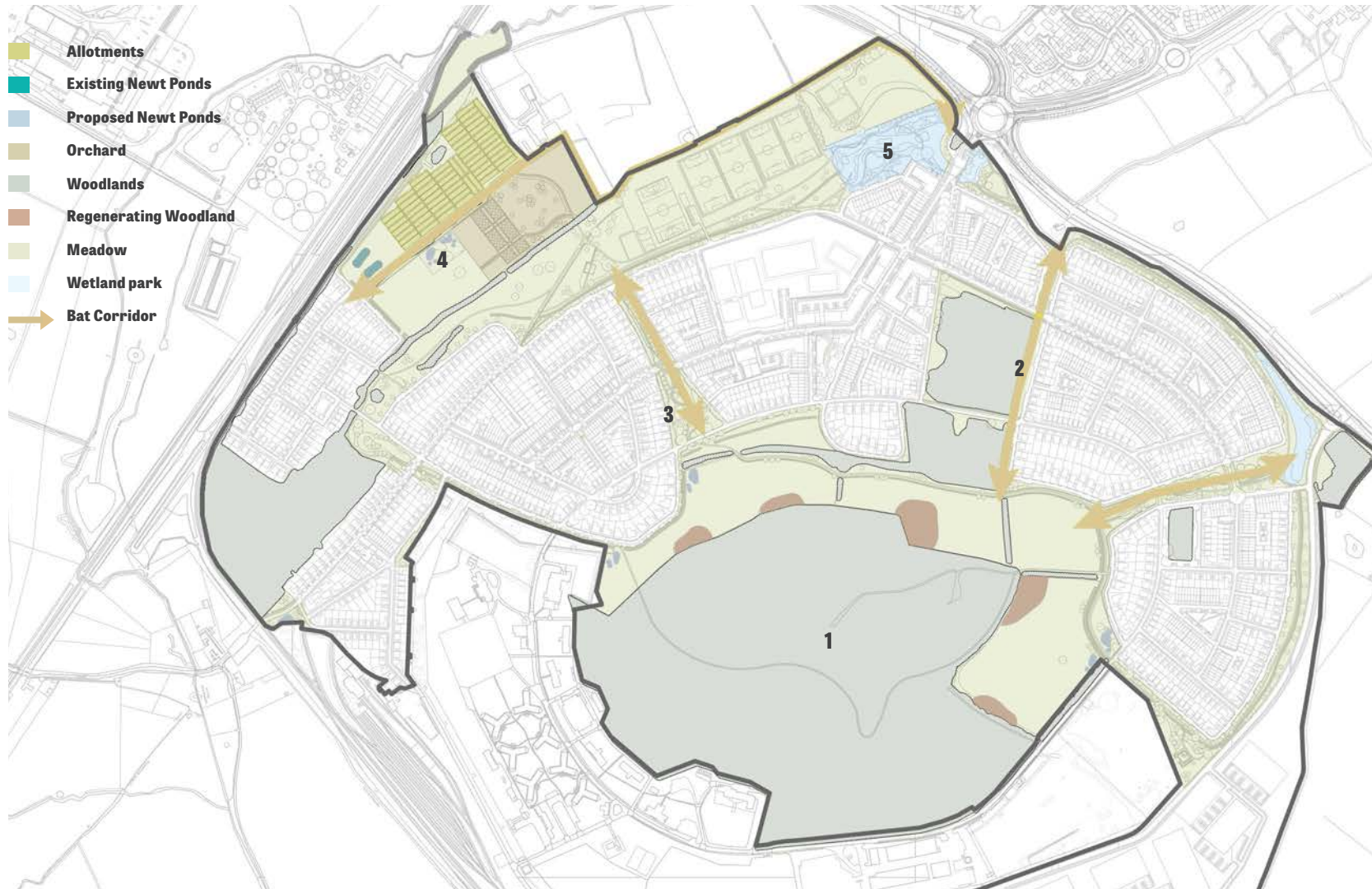
The substantial woodland on top of Graven Hill forms the focal point of the site, however there are significant areas of smaller woodlands, tree-lined avenues and clusters of high-quality trees throughout the site.

Where possible, the retained trees are integrated in the masterplan and form the primary source of character in some areas.



LEFT
Tree Retention Diagram

Ecology



The retention of many ecological aspects on the site creates many constraints. Many of which are the protection of specific habitats and species. Those relevant to the site include Badgers, Bats, Dormouse, Great Crested Newts and Reptiles.

The approach to ecology at Graven Hill seeks to protect and enhance existing habitats and features of interest, as well as creating new ecologically valuable habitats and enhancing much of the low quality grassland.

1. Graven Hill Woodland

Retaining the woodland, encouraging natural regeneration and creating links to the residential areas.

2. Bat Corridors

Creating an interconnected wildlife habitat for bats from the woodlands (e.g Green Corridors).

3. Swale Park

Naturalistic corridor of marginal planting & longer grass. Continuous & fluid unlit tree-lines to provide a clear flight path for foraging bats.

4. Proposed Newt Ponds

The site has a substantial population of Great Crested Newts. Creation of new ponds and hibernaculas to provide adequate protection.

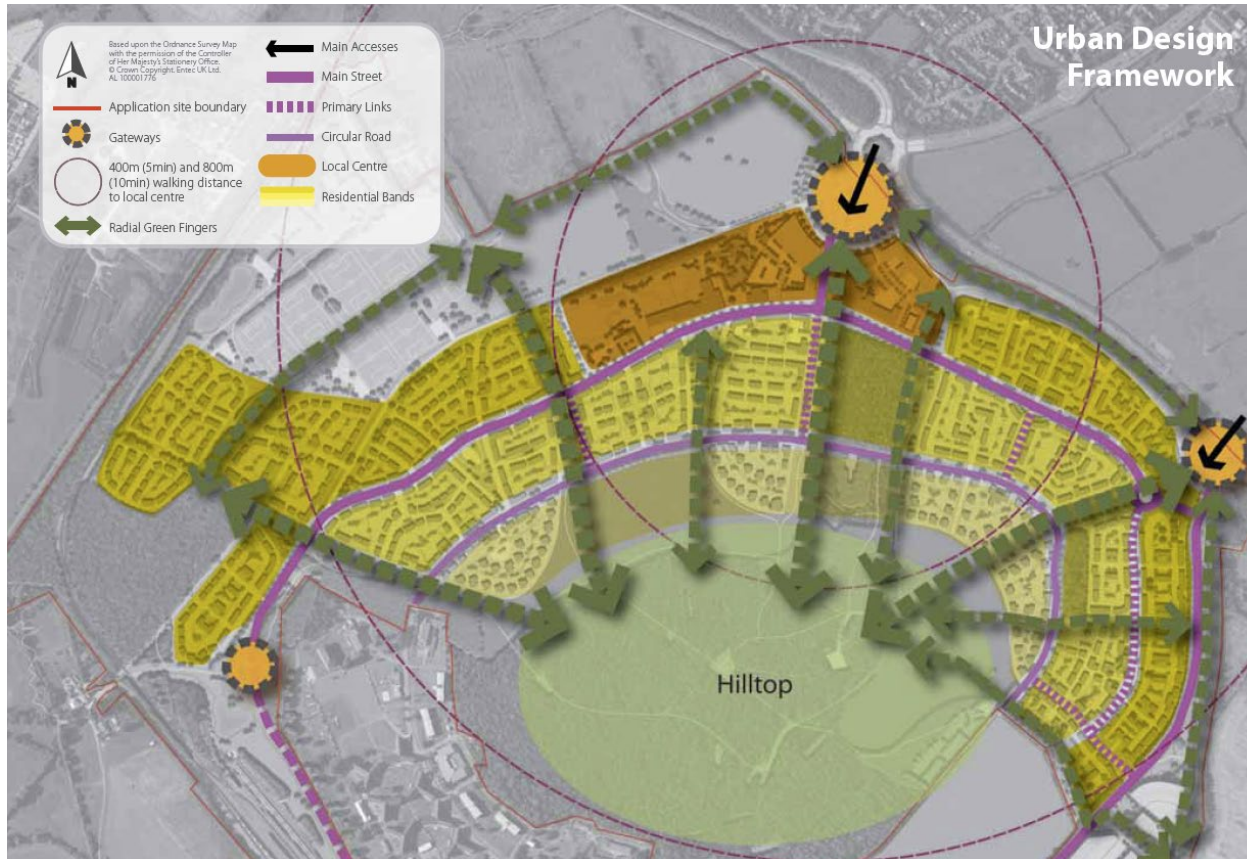
5. Gateway Park

As the 'Gateway Park' is located at the entrance, it provides a welcoming environment consisting of natural landscaping, through the use of ponds, swales and marginal planting creating a natural habitat.

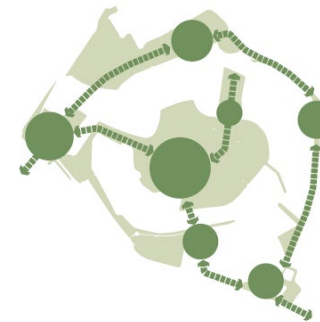
LEFT
Ecological constraints

DIO / AMEC Masterplan

Review of the original outline planning scheme.



Green Corridors



Wildlife Corridors

The core principles of the development is to retain and enhance the existing landscape features and providing additional green infrastructure throughout the development.

The landscape strategy includes the radial green fingers which offers character and green corridors towards the hilltop. The proposed development is arranged to offer protection for wildlife in the southern area of the site by focusing the activity on the northern areas of the hilltop.

1900 Homes Calculation

The outline consented housing figure for 1900 homes has been calculated by taking the site, total of the residential developable area (less 10% for efficiencies) divided by the total plot area from the indicative house types when multiplied by the unit mix. The detailed development of the current proposed masterplan layout has shown that the 10% loss of efficiency allowed in calculations for the consented scheme has not been sufficient to overcome the topographical constraints of the Graven Hill site and plot specific planning considerations and has resulted in a loss of 161 units when set out in a deliverable masterplan layout.

NOTE
This is an extract from the AMEC/DIO Design & Access Statement (09/11)

LEFT
AMEC Concept Masterplan

DIO / AMEC Masterplan

Review of the original outline planning scheme.



NOTE
This is an extract from the AMEC/DIO Design & Access Statement (09/11)

1. Village Centre

Whereas it is beneficial for the shopfront to be located at the entrance, this doesn't create a Village "Centre" feeling.



2. Lack of Parking

There are no street parking arrangements provided or shown.



3. Green Corridor

Green corridors created from meadows, vegetation and existing woodlands is another core principle of the site.



4. Rows of Terraces

Terraces can achieve the desired unit count of 1900 homes. Although this does not provide the required mix of homes.



5. Housing Blocks

Having housing blocks which share a party wall are not suitable for self-builds.



6. Westacott Road

The retention of existing trees extending from the woodlands area to the village entrance. Providing clear sight of the hilltop is a core principle of the site.



7. Allotments

Location and amount of allotments spaced evenly throughout the site.



8. Sport Pitches

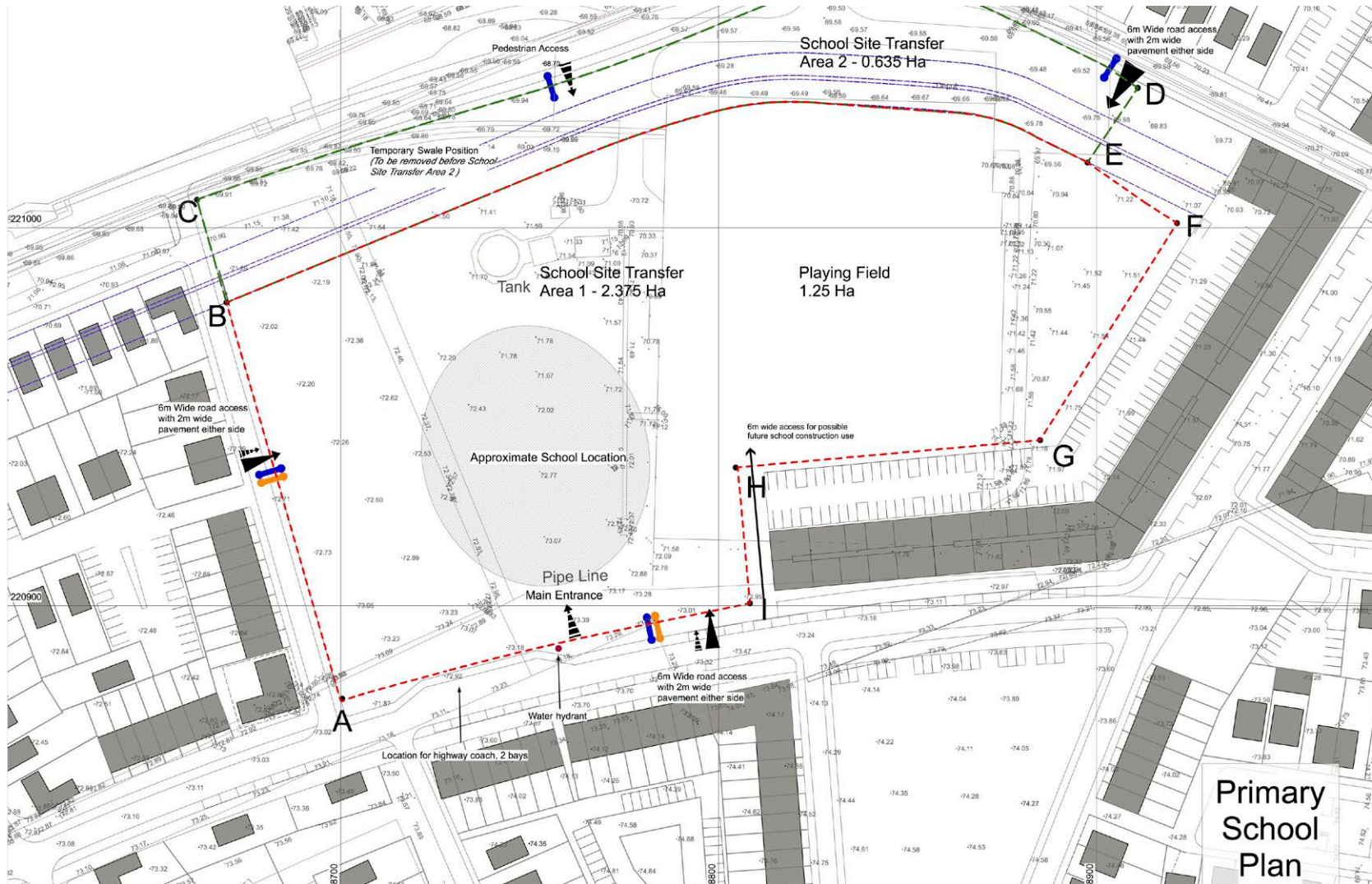
8 Adult and 1 Junior pitch provided for the proposed 1900 homes.



LEFT
AMEC Masterplan

Constraints

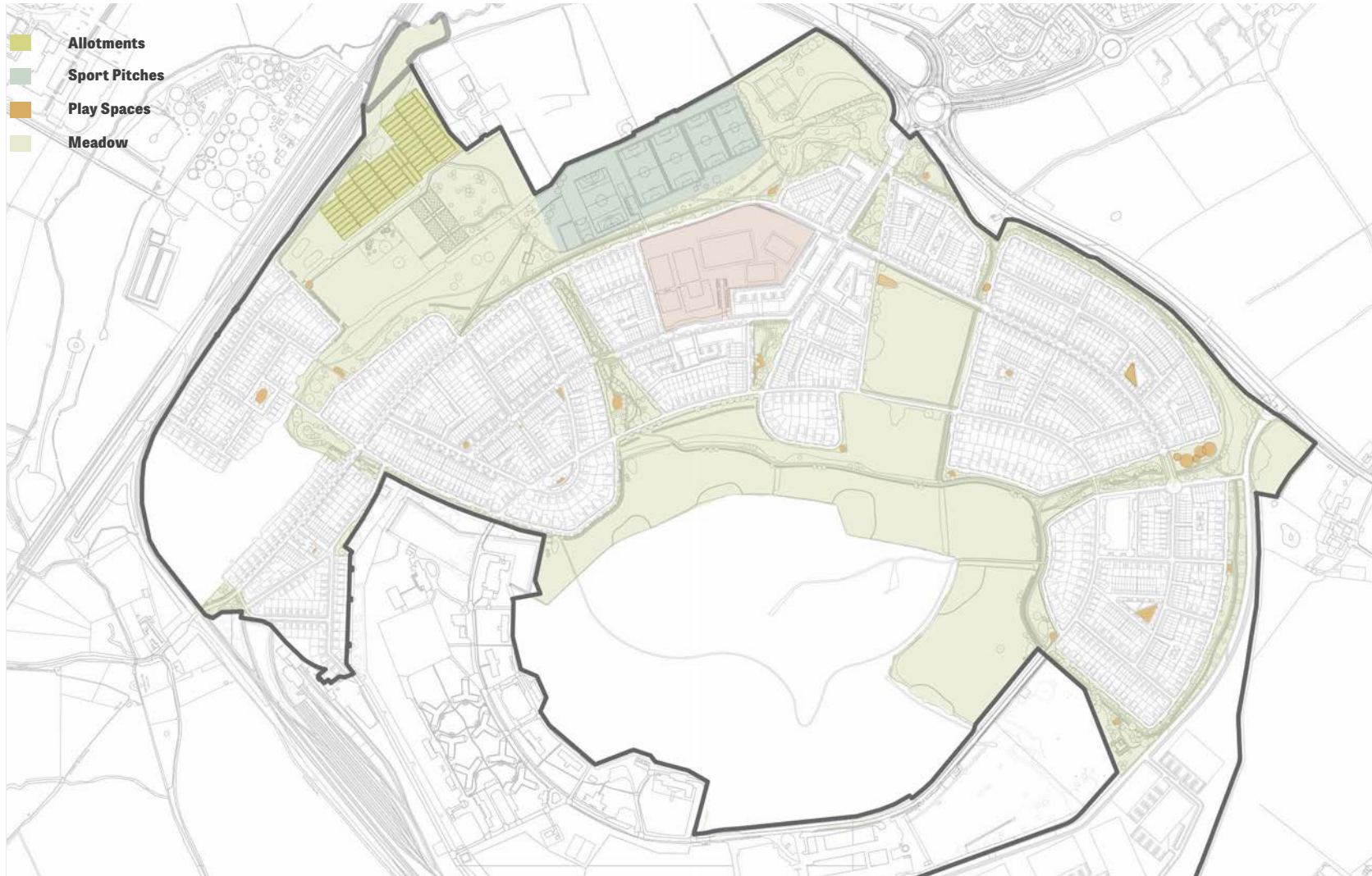
Primary School



The 2 FE Primary School Site has constrained the development of the masterplan, insofar as the school requires a fixed area in the S106 and a frontage length of 110m.

LEFT
Outline planning Primary School plan.

Constraints



Open space, allotments and play space provisions based on CDC Core Strategy Policy 4.

Development Proposals will be required to contribute to the provision of open space sport and recreation, together with secure arrangements for its management and maintenance. The amount, type and form of open space will be determined by having regard to the nature and size of development proposed and the community needs likely to be generated by it. Provision should usually be made on site in accordance with the minimum standards of provisions set out in table 12 below.

Table 12 Local Standards of Provision - Outdoor Recreation

Type of provision	Quantitative standard	Accessibility standard	Minimum size of provision	Threshold for on-site provision
General greenspace (parks and gardens; natural, semi-rural or amenity green space)	1.51 ha per 1000 urban dwellers 2.3 ha per 1000 rural/urban edge dwellers	5 minute walk (amenity open space) (403m) 15 minute walk other (1200m)	200 sq m	10 urban dwellings 6 rural/urban edge dwellings
Playspace (combining provision for younger and older children including MUGAs)	0.78 ha per 1000 people	5 minutes walk (400m) except for NEAPs 15 m walk (1200m)	LAP: 100 sq m including buffer LEAP: 400 sq m activity zone; 3600 sq m including buffer NEAP: 1000 sq m activity zone; 5500 sq m including buffer	10 dwellings (for a LAP) 20 dwellings (for a LEAP and LAP) 100 dwellings for a NEAP and LEAP/LAPs
Outdoor sports provision (combining tennis courts, bowling greens, golf courses and playing pitches)	1.13 ha per 1000 people	10 minute walk (800m) urban areas 10 minute drive (8km) rural areas	0.12 ha	65 dwellings
Allotments	0.21 ha per 1000 people	10 minute walk (800m)	0.2 ha	275 dwellings

LEFT
Masterplan highlighting constraints in accordance to CDC Core Strategy and OCC Requirements.

Masterplan Evolution

Consultations



Studio Real have provided external reviews on the Graven Hill development.



There has been continuous input from Oxfordshire County Council on the Graven Hill development.



The National Custom & Self Building Association has provided input on the self-build scheme at the “Soft Launch Event”.



Having written “Manual for Streets”, Phil Jones Associates are experts in contemporary and sustainable design and have provided input on the scheme.

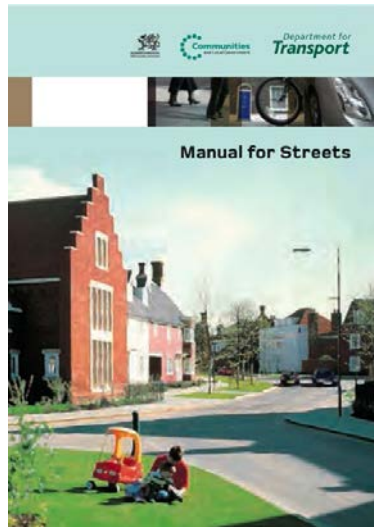
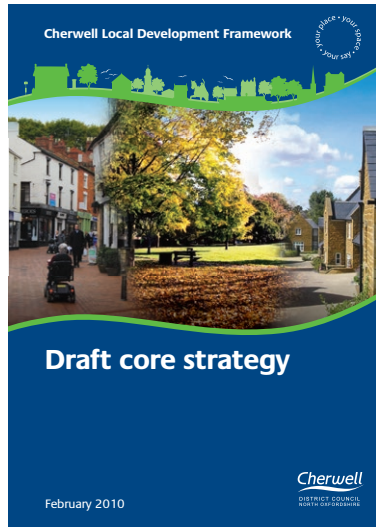


There has been continuous input from Cherwell District Council on the Graven Hill development.

LEFT
Soft Launch Event
March 2015

Design Guides

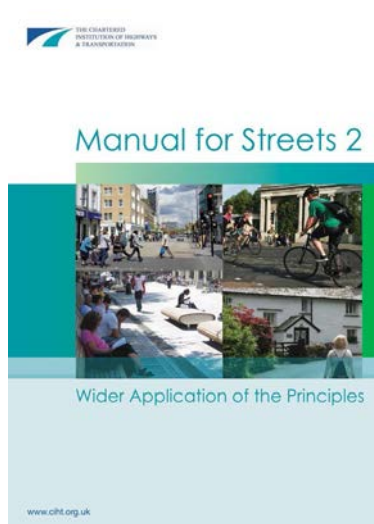
The following documents have been used to inform the development of the masterplan.



Pavilions and Clubhouses



Village and Community Halls



Design Guidance Note
Creating a sporting habit for life



DESIGN GUIDE



Building for Sure Start: a design guide
Integrated provision for under-fives



The Cherwell District Council draft core strategy has been used generally to inform the masterplan and calculate the sport pitch land area.

Manual for Streets 1 and 2 have had a significant influence on the street strategies and design, particularly related to junctions, shared surfaces, parking, cycling and design for low vehicular speeds. Manual for Streets author Phil Jones has reviewed the scheme on several occasions.

The Sport England guidance notes have informed the layout of the sports field, the orientation of sport pitches, positioning and sizing of sports pavilion, and the specification of pitches.

Car Parking: What Works Where, has informed the approach to communal parking areas and street design in the masterplan.

The siting and sizing of the community centre and nursery have been informed by the Sport England guidance note on village and community halls and the Sure Start design guide.

LEFT
Design guidance documents.