

Wirral Council

STRATEGIC HOUSING LAND AVAILABILITY ASSESSMENT - APPENDIX 12



ROGER TYM & PARTNERS
Planners and Development Economists

DESCRIPTION OF THE SITES DATABASE AND OUR APPROACH TO THE CALCULATION OF THEORETICAL YIELDS

July 2010

ROGER TYM & PARTNERS

61 Oxford Street
Manchester
M1 6EQ

t 0161 245 8900
f 0161 245 8901
e manchester@tymconsult.com
w www.tymconsult.com

This document is formatted for double-sided printing.

CONTENTS

1	SITES DATABASE.....	1
2	CALCULATION OF THEORETICAL YIELDS	5

1 SITES DATABASE

- 1.1 The Microsoft Access Sites Database contains details of all 343 sites for which an achievability assessment was carried out. Information is also stored in the database for the 302 small sites for which full achievability assessments were not undertaken. The information contained in the database is detailed below.

Database Reference Fields

- 1.2 For each site, basic reference details and other factual information are always visible at the top of the database, whether Part 1, 2, 3, 4, or 5 of the database is selected. The standard reference fields are specified in Table 1.1 below.

Table 1.1 Sites Database - Reference Fields

Data Field	Form of Data/Possible Options
RTP Unique Ref.	Sequential site numbering system, providing each site with a unique reference.
Source Ref. (if available)	Taken direct from Council or other sources.
Source Type	Options are: 'HLA' (Housing Land Availability schedule); 'HOU' (outstanding housing allocations from the UDP); 'EMP' (sites allocated for employment in the UDP); 'Call for Sites 2007'; 'Call for Sites 2009'; 'GREEN' (sites from the Council's schedule of urban greenfield sites); 'Green Belt Infill Village sites'; 'Planning Permission expiry sites' (sites with planning permission which is due to expire shortly); and 'Other' [if 'Other' is selected, details of the current land use are provided in a free-text box].
Other Source Types (if available)	Other source(s) of site, only applicable if the site was identified through multiple sources. Same options as for 'Source Type'.
Grid Reference	Easting and northing of the site centroid, generated by GIS.
Site Name & Address	Site name (where applicable) and approximate address, based on the site's geographic location. Generated from GIS or entered manually if a Call for Sites submission.
General Information/Other Comments	Free-text box which contains other relevant information and findings from site visits.

- 1.3 This part of the database also contains our 'Overall Site Category' rating for each site (1, 2 or 3), together with a summary of the reasons for the site's Category rating. Details of how we categorised sites are provided in Section 3 of our report and in Appendix 4, which specifies all of the assessment factors and criteria that we applied.

Database Part 1 - Site Details

- 1.4 The first main part of the database contains a range of contextual and factual information about each site (gross site area, land type, and so on), much of which was collected as a desk-based exercise and using GIS. Our assessment of the effect that any permanent features would have on the proportion of the site available for housing development is provided in the first part of the database.

Table 1.2 Information Contained in Part 1 of the Sites Database

Topic	Data Field	Form of Data/Possible Responses
Site Details	Site area in hectares (gross)	Automatically created using GIS by measuring the area of land within the site polygon.
	Greenfield / PDL	Greenfield or Previously Developed Land, based on the surveyor's on-site observations and Council records.
	Current land use	Options are: agriculture & related incl. forestry; community services; industry & business; minerals; mixed-use; open space; recreation & leisure; residential; retail; transport; and utilities & infrastructure; vacant; and other [if 'other' is selected, details of the current land use are provided in a free-text box].
	Former land use	Options are the same as under 'current land use'.
	Character of Surrounding Area	Description of the area surrounding the site.
	Physical limitations	Assessment of permanent features at the site, and the effect on the proportion of the site's developable area after allowing for the feature(s).

Database Part 2 - 'Suitability' Information

- 1.5 The second part of the database provides details of any physical or bad neighbour constraints which might affect the site's potential for housing development, as well as any important planning policy constraints such as Green Belt.

Table 1.3 Information Contained in Part 2 of the Sites Database

Data Field	Form of Data/Possible Options
Access infrastructure	On-site assessment of whether new access infrastructure would be required in order to facilitate housing development.
Drainage infrastructure	On-site assessment of whether new drainage infrastructure would be required in order to facilitate housing development.
Ground condition constraints	On-site assessment of whether ground treatment is likely to be required in order to facilitate housing development.
Bad neighbour constraints	As assessed on site. Possible responses are 'none'; 'potential for mitigation'; or 'major constraints'.
Flood risk	Records whether the site is within Flood Risk Zone 1, 2 or 3a, measured using GIS (Flood Zone 3b is unsuitable for residential development and so we have not considered any land that is located within Flood Zone 3b).
Green Belt	Records whether the site is within the Green Belt identified using GIS. Options are 'Not within the Green Belt'; 'Located within a Major Developed Site in the Green Belt'; 'Located within a Green Belt Infill Village'; and 'Within the Green Belt but not on a Major Developed Site or an Infill Village'.
Nature and earth science conservation	Records whether the site falls within any of the nature/wildlife conservation areas described in the criteria note, identified using GIS.
Green space	Records whether the site is within an area of designated Recreational Open Space identified using GIS.
Employment land	Records whether the site is a designated Primarily Industrial Area, Employment Development Site or Wirral International Business Park.

Database Part 3 - 'Availability' Information

- 1.6 In Part 3 of the database, we provide details of the current occupation of the land, together with any other details which we consider might affect availability, reflecting observations from the site visits and other information supplied by site promoters.

Database Part 4 - Achievability Assessment

- 1.7 The achievability assessment was carried out by A.P. Sheehan & Co (APS), which gave achievability scores and comments under each of the five achievability scenarios, for the sample sites. This section also illustrates which scenario is being considered for each particular site.

Database Part 5 - Yield Assessment

- 1.8 Part 5 of the database displays the information needed to calculate a theoretical dwelling yield for the site. Site area and permanent features (which are entered in Part 1 of the database) are displayed, together with data on site characteristics (which will have implications for the site's density), gross:net ratios, mixed use factors and the density rate that was applied to the site. This information is used to derive a figure for the number of dwellings the site could be expected to yield; see Section 2 for more details.
- 1.9 Part 5 of the database also allows a yield figure to be entered manually. The main examples of this approach relate to "call for sites" submissions, which often specify the number of dwellings that the developer intends to provide at the site. With these sites, if the number of dwellings proposed would result in a development density that is appropriate in the local context, then we have inserted the yield figure manually, rather than using the standard density rates described above.

2 CALCULATION OF THEORETICAL YIELDS

2.1 The following factors are taken into account when calculating theoretical yields:

(i) Gross site area

2.2 The gross site area specified in the database is the area within the digitised site polygon measured using GIS.

(ii) Permanent features factor

2.3 A factor was then applied to represent the percentage of the gross site area remaining after taking account of any site specific capacity constraints relating (for example) to site shape, topography and permanent obstructions to development such as substations or water bodies. Permanent features and site constraints, and the appropriate percentage reduction, were assessed on a site by site basis for all sites in the database.

(iii) Gross to net ratio

2.4 A gross to net ratio was applied to the residual site area following application of the permanent features factor. The gross to net ratio takes account of any requirements to provide supporting facilities at the site. We have adopted the most up-to-date advice on net density, namely that contained in Annex B of PPS3 which states that net dwelling density is calculated by:

'...including only those site areas which will be developed for housing and directly associated uses, including access roads within the site, private garden space, car parking areas, incidental open space and landscaping and children's play areas, where these are provided.'

2.5 For the largest sites (above 10ha), the gross to net ratio that we applied was 70 per cent, to allow for strategic open space and infrastructure. For sites of between 0.4ha and 10ha, the amount of strategic open space and infrastructure required will be much less, and so a greater proportion of the site can be used for housing. Consequently, we have applied a less severe ratio for sites with a gross area of between 0.4ha and 10ha. Sites up to 0.4ha should be capable of utilising existing infrastructure and so we have not applied a discount to the gross area for these sites.

2.6 It should be noted that, in reality, each site would be considered individually as and when it was taken forward for allocation or proposed for development. Nevertheless, the gross to net ratios that we applied for the purposes of our yield assessment are as set out in Table 2.1.

Table 2.1 Gross to Net Ratios

Gross Site Area (ha)	Percentage Net
Up to 0.4ha	100%
0.4ha to 2ha	90%
2ha to 10ha	75%
Over 10ha	70%
Over 50ha	50%

Source: 'Tapping the Potential', DETR (2000), adapted by RTP to reflect our experience around the country and our recent discussions with housebuilders.

(iv) Mixed use factor

2.7 A mixed use factor was applied to sites which are likely to be developed for mixed uses (regardless of whether the mix of uses is horizontal or vertical), in order to indicate the

notional proportion of the site's gross area which could be used for residential uses. Such sites are typically located within town centres or designated mixed-use areas.

- 2.8 The mixed use factor that we applied was 50 per cent. It is also possible, through the database, to apply other mixed use factors (25 per cent, 75 per cent and 90 per cent). Whilst we have not applied these factors to any of the sites in the database, the Council might prefer to apply one of these alternative factors to specific sites for the purposes of sensitivity testing or in future updates of the study, and this functionality has therefore been incorporated into the database.
- 2.9 Again, each site would need to be considered in more detail on a case-by-case basis as and when it came forward for development. These sites will need a mixed use policy rather than a housing allocation and a separate employment allocation. In any event, most of the sites in the database have been treated as pure housing sites.

(v) Density assumptions

- 2.10 In order to identify appropriate density rates to apply to sites in the Wirral SHLAA, we analysed recent density trends in different parts of the study area (the detailed findings are set out in Appendix 5). We have also used the findings from the development appraisals carried out by APS, and our experience of densities achieved in similar areas throughout the country. The densities we have used for the purposes of the study are set out in Table 2.2 below.

Table 2.2 Density Rates Used in the Liverpool SHLAA

Site Location Characteristics	Density (dph net)
Identified as appropriate for flats, and located in the HMR	75
Identified as appropriate for flats, and located outside of the HMR area	60
Identified as appropriate for a mix of houses and flats	53
Identified as appropriate for houses	36

- 2.11 It should be emphasised that in many cases we have specific information with regard to likely yield figures (for example, from call for sites submissions). Where this is the case we have reviewed the number of dwellings proposed for the site and - provided the resultant density seems reasonable in the local context - we have used this as the expected site yield, rather than applying the standard density rates described above.
- 2.12 Apart from the sites for which we entered a yield figure manually, the housing capacity of the sites in our database was calculated as follows:
- $$\frac{\text{Gross site area} \times \text{permanent features factor} \times \text{gross to net factor} \times \text{mixed use factor} \times \text{density}}$$
- 2.13 At the bottom of the fifth part of the sites database are two fields entitled 'Net residual site area available for housing (ha)' and 'yield'; these figures are the residual area and theoretical dwelling yield after the factors described above have been applied.
- 2.14 In practice, the Council will have to undertake more detailed work on the densities that are achievable at any given site, as and when it is brought forward for development. Guideline capacities for large sites must be treated with caution as we can not always foresee the mix of uses that these sites might be called upon to accommodate. Nevertheless we consider that the consistent approach described above is appropriate for the purposes of this strategic assessment.