



Maw Green, Crewe
Design & Access Statement

February 2012



February 2012

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Preface

This Design and Access Statement has been prepared by One Creative Environments Ltd on behalf of Richborough Estates. It has been written in conjunction with Harris Lamb Property Consultants, BWB Consulting, PTB Transport Planning Ltd, Just Ecology, ASL Environmental, RPS, REC, Northamptonshire Archaeology and Midlands Forestry.

This document supports an application for outline planning permission for residential development at Maw Green Road, Crewe. The site comprises approximately 9.59 hectares (23.7 acres) of land, which comprises a mix of agricultural land, restored former landfill and a small holding. It is proposed for a sustainable mix of dwelling tenures, including infrastructure, landscape amenity and open space.





1. Vision

To create a vibrant new addition to the existing community that responds sensitively and positively to its character and setting to create a high quality design with a real sense of place.

A place which encourages a sense of community pride and ownership with a generous amount of high quality public open space. A place where people want to come and live, play and socialise.

Careful consideration has been given to the site's existing constraints and opportunities, neighbouring uses and development, access and accessibility, the latest planning policy and design best practice.



WALKABLE NEIGHBOURHOODS

- An integrated network of footpaths and cycleways
- Promotes walking and cycling to destinations within and outside the site

CHARACTER AND QUALITY

- Creating a place with character and identity with legible landmarks and focal points
- Significant and meaningful green spaces
- Significant infrastructure planting and range of habitats to establish an attractive, ecologically diverse setting
- Ensuring an active, engaging streetscape interface with public spaces and streets for natural surveillance and a safe environment

HEALTHY LIVING

- Opportunities for recreation and exercise within 5 minutes of the doorstep
- 'Green Spaces for All' - an easily accessed Green Way network
- Encourage healthy living and physical activity through the provision of high quality green spaces for play and recreation that are available to both new and existing residents

ENVIRONMENTAL SUSTAINABILITY

- High quality design and construction which responds to the evolving sustainable ways of living
- Providing for a mix of tenures to ensure a balanced and sustainable community

Scope and Content of Design and Access Statement

This Design and Access Statement supports an Outline Planning Application for a residential development for up to 165 new dwellings on this site on behalf of Richborough Estates.

The Design and Access Statement is part of a comprehensive package of information submitted with the outline application, which principally includes:

- Planning Statement
- S106 Heads of Terms
- Statement of Community
- Housing Statement
- Ecological Assessment, Extended Phase 1 Habitat Survey
- Hedgerow Assessment
- Protected Species Surveys and Assessments
- Ecological Mitigation Strategy
- Geo-Environmental Site Investigation Report
- Arboricultural Survey
- Flood Risk and Drainage Assessment
- Transport Assessment
- Landscape Appraisal
- Open Space Appraisal
- Landscape Strategy
- Noise Assessment
- Archaeological Assessment
- Residential Travel Plan
- Air Quality Assessment

This document has the following function and purpose:

- to provide a concise description of the issues and evaluations that have informed the design decisions leading to the current form of development
- to set out the urban design, master planning and landscape strategy for the development
- to provide comprehensive supporting information on the development in terms of amount of development, layout, appearance, access and circulation, landscape amenity and drainage.

This Design and Access Statement includes a master plan for Maw Green and supporting development strategies which together demonstrate the compliance of the proposals with the aims and objectives of local, regional and national planning policy.







Figure 2.1 Application Site Boundary

Site Location and Context

The application site is located in the suburb of Maw Green approximately 1.5 kilometres to the north-east of Crewe Town Centre. The location of the application site in its town wide context is shown in Figure 2.2 - Site Location Plan. The site is situated on the residential edge of Maw Green, off Sydney Road which is a main arterial route north to south, which links up to the A5020 ring road.

The application site lies either side of Maw Green Road. The north and north-eastern boundary lies adjacent to the Maw Green Landfill Site. It is adjoined by residential development to the west, north-west, and south, and fields to the south-east.

The Crewe - Manchester Rail line runs approximately 70m to the east of the site.

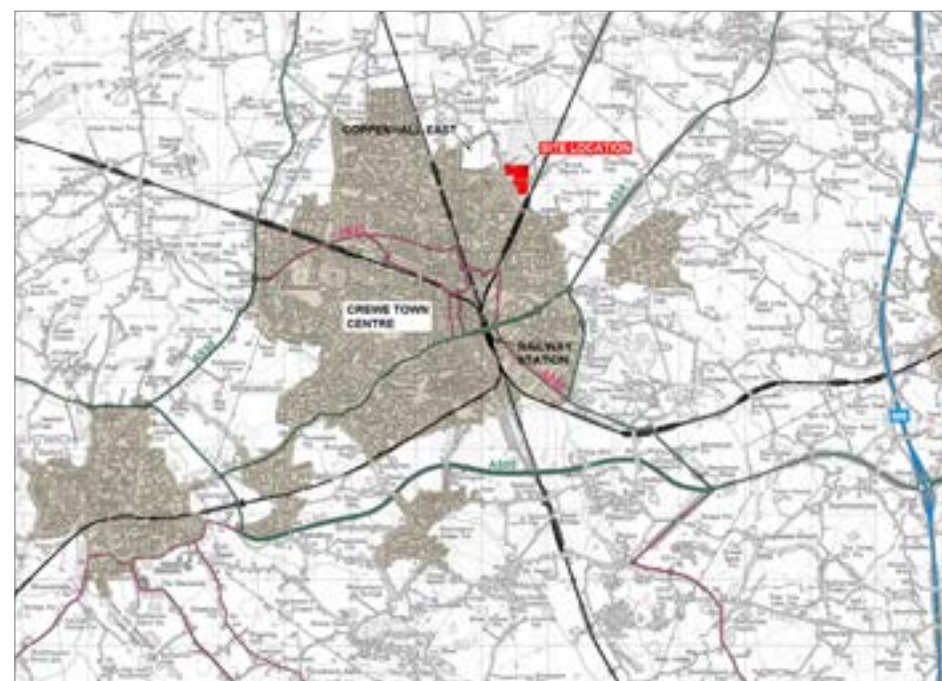


Figure 2.2 Site Location Plan



1. Introduction

Maw Green is a 23.7 acre site in a highly sustainable location on the north-eastern edge of the town of Crewe. It is included in the Council's Strategic Housing Land Availability Assessment as suitable for residential development.

This Design and Access Statement is submitted on behalf of Richborough Estates in support of an Outline Application for the Maw Green site.

Site Description

The application site comprises two parcels of land either side of Maw Green Road. It is laid predominantly to agricultural pasture land, divided by hedgerows into a series of small fields grazed by horses. There is a small area of woodland, ponds and buildings on the western side of the site. A former area of landfill, now restored to grazing land, is present on the north eastern side of the site.

The site is bordered by housing to the west and an operational landfill site to the north and north-east. The main line Crewe to Manchester railway line lies on embankment approximately 70m beyond the eastern boundary.

This is a predominantly flat landscape with relatively few hedgerow trees or dominant hedgerows. There is an absence of high vegetation with urban fringe elements including two overhead power lines and the railway line with overhead gantries traversing the landscape and diminishing the area’s rural character. The most significant feature in the landscape is the landfill site which dominates the setting.

The northern section of the site comprises five small parcels of land subdivided by fencing and a few hedgerows. One significant landscape feature, a species-rich hedgerow, runs east to west along the north-eastern boundary. This supports a few mature oak trees, one of which provides a roosting habitat for barn owls. Three of the land parcels are grazed by horses, the northern most parcel supports a small holding and hardstanding. The area of restored landfill which forms the eastern most parcel rises gently from 46mAOD on the west and southern boundary up to 51m in the upper north-eastern corner. It is bound on all sides by a young but well-established 1.5m hedgerow, which supports a range of native hedgerow species. A small woodland plantation and pond on the western boundary supports a mix of deciduous and evergreen trees many of which are suffering from overcrowding. The water body is of poor water quality and lacking in bank vegetation as a result of captive wildfowl.

The southern section of the site comprises two parcels of land sub-divided by and contained by species-poor hedgerows, which are thin and leggy and support very little tree cover. The land rises gently from 45m at the eastern corner adjacent to Maw Green Road, up to 49m on the mid-western boundary and 53.2m on the south-western boundary. The rear gardens to bungalows on Sydney Road abut the western boundary. These are bound by a stock proof 1.2m high hedge. A detached residential property with large grounds runs the length of the western boundary. This is bound by a tall hedgerow along much of its length with a number of large mature trees over hanging the site.



The northern section of the site is flat, has limited hedgerow/tree cover to the boundaries, a pond surrounded by densely planted trees and housing along Groby Road adjacent.



The only area of species rich hedgerow runs along the northern boundary. The operational landfill site lies adjacent and an area of former landfill, now restored to green field, comprises the north-eastern section of the site



The southern section of the site, which comprises rising land and field boundaries defined by thin, species-poor hedgerows. Mature trees lie adjacent to the southern boundary. The operational landfill site and railway gantry are significant visual detractors.



View of the south-western boundary over looked by the bungalows of Sydney Road and detached property with large grounds and mature trees to the southern boundary.

Planning Context

The following sets out the planning policy context to the proposals focusing particularly on policy relevant to this statement.

Planning Policy

For the purposes of Section 38 (6) of the Planning and Compulsory Purchase Act 2004, the approved development plan for the area comprise of the North West of England Plan – Regional Spatial Strategy 2021, the Cheshire 2016: Structure Plan Alteration (Adopted December 2005) and the saved policies of the adopted Crewe and Nantwich Local Plan 2011. Also of relevance is the Council’s ‘Interim Planning Policy on the Release of Housing Land February 2011 (IPP).’

National Planning Policy

The advice in PPS3: Housing requires Local Planning Authorities to maintain a five year supply of housing land at all times (see paragraph 57 of PPS3). This advice is reiterated in draft NPPF. Furthermore, paragraph 7.19, supporting RSS Policy L4, requires there to be a minimum five year supply of deliverable land. Where Local Planning Authorities cannot demonstrate that a five year supply of deliverable sites exist, the advice in PPS3 states that they should consider favourably planning applications for housing (paragraph 71). In so doing the Council should have regard to the advice set out in paragraph 69 of PPS3. The planning statement considers the matters raised in paragraph 69 of PPS3 and confirms the scheme is compliant.

Local Planning Policy

In February 2011 the Council adopted an Interim Planning Policy on the Release of Housing Land. The purpose of this document was to remedy the shortfall in the 5 year housing land supply by facilitating the release of a limited number of housing sites in Crewe, outside of the Green Gap subject to meeting all the criteria. A detailed assessment of the application proposal and how it performs against the criteria set out in the interim policy has been undertaken and this is detailed in the planning statement. In summary, the application site complies with the requirements of the IPP and, therefore, the principle of development is acceptable. As detailed in the planning statement, the proposal also accords with the detailed design policies included in the adopted Local Plan (2001).

The scheme is also compliant with the emerging Core Strategy. Although that document identifies a number of options for consideration, Crewe is regarded as the principal settlement of the district and, as such, development at Crewe will underpin the future course of the strategy.

Minimum Public Open Space Requirements

- 0.64 ha (6,400sq.m) for outdoor sport and recreation
- 0.32ha (3,200 sq.m) for children’s play space. (0.12ha (1,280 sq.m) equipped play area and 0.20ha (2,000sq.m) of informal play space)

Open Space Provision

The total area of public open space to be provided is 4.2ha (10.37 acres), this exceeds the Fields in Trust 6 acre standard (formerly the National Playing Fields Association), which requires 2.4 ha (6 acres) for 1,000 people. Based on an average occupancy rate of 2.4 persons per household, this development will generate approximately 396 people, this equates to 0.95ha (2.4 acres) of open space to be provided.

Consequently, this development is providing an additional 3.25ha of open space. This is a major benefit both to the development and the wider community.



3. Planning Context

This section refers to the planning policies relating to the site. It draws upon national and local planning guidance provided within:

- PPS 1 Delivering Sustainable Communities
- PPS3 Housing
- Open Space Provision





4. Assessment

This section refers to the site context and all the elements of the site and includes:

- Historical Context
- Land Use
- Landscape Character
- Topography and Visual
- Transport
- Ecology
- Existing Vegetation
- Open Space
- Geo-Technical Ground Conditions
- Archaeology and Cultural Heritage
- Air Quality
- Noise
- Flood Risk and Drainage
- Socio-Economic Context
- Local Facilities
- Summary



| Key | Existing |
|-----|------------------------------------------------------------------------------------------------------|
| | Site boundary |
| | Existing trees to be retained |
| | Existing species rich hedgerow |
| | Species poor hedgerow - but useful screening feature and ecologically classed as important (bar HHS) |
| | Location of off site trees with risk attached due to condition/species |
| | Existing French drain at base of landfill site |
| | Monitoring wells on development site |
| | Monitoring wells on landfill |
| | Existing ponds |
| | Level constraints for development/infrastructure 45.5 (south) / 46-46.5 (north) |
| | Existing Sustrans Route |
| | Existing Bus Stops |
| | Landfill site |
| | Visually poor interface |

Site Assessment

A comprehensive series of assessments carried out principally include:

- Ecological Assessment
- Extended Phase 1 Habitat Survey
- Hedgerow Assessment
- Protected Species Survey and Assessment
- Ecological Mitigation Strategy
- Geo-Environmental Site Investigation Report
- Arboricultural Survey
- Flood Risk and Drainage Assessment
- Transport Assessment
- Landscape Appraisal
- Open Space Appraisal
- Landscape Strategy
- Noise Assessment
- Archaeological Assessment
- Residential Travel Plan
- Air Quality Assessment

Figure 4.1 Site Assessment Constraints

Site Assessment

Introduction

The topography of the surrounding area is generally flat with a gentle fall from the south-western boundary at 53.21m above Ordnance Datum (AOD) down towards the Fowle Brook at 45.10m AOD. Geological maps indicate that the site lies on Triassic Mercia Mudstone.

The site consists of two parcels of land which lie either side of Maw Green Road. The site is predominantly pasture land currently grazed by horses with hedgerows to field boundaries. The site is bordered by housing to the west and a landfill site to the north and north-east. The north-eastern section of the site comprises former landfill which is now restored.

The site lies to the north-east of Crewe Town Centre and is located within the suburb of Maw Green.

Historical Context/Land Use

Crewe is a Cheshire town of about 83,000 people. Although there was a settlement named ‘Creu’ in the Domesday Book, Crewe’s development as an urban centre stemmed from the expansion of the railway industry, which was planned out in 1843 around the railway junction station which opened in 1837. The railways still play a major part in its local industry. Crewe also has a significant automotive manufacturing legacy, when Bentley relocated their car production to Crewe in the 1940’s, after Rolls Royce purchased the firm in 1931. It was acquired in 1998 by Volkswagen AG and Bentley still remains a significant local employer.

The site itself has always been agricultural land in the context of Maw Green Farm, which lies immediately adjacent to the site on the western boundary off Maw Green Road. Historic records show Maw Green on OS Map1882 as a small rural hamlet with tithe field patterns. OS Map 1954 shows large planned post-war growth of garden suburb development immediately south-west of the site at Church Coppenhall. Further growth and merging along Sydney Road over to Church Coppenhall is shown on OS Map 1992 and includes the extents of Maw Green Landfill site which began operating in 1986 and extends to some 66 hectares immediately north and east of the site.

Topography

The site is well contained visually, contained by the landfill site to the north, the localised land rise and residential housing of Sydney Road to the west and the railway line on embankment to the east.

The northern section of the site is predominantly flat with levels falling gently eastward from 53.0m at Groby Road which forms the western boundary down to 45.1m at the hedgerow which defines the former landfill site. This is now restored and lies as a gentle land rise up to 51m. The southern section of the site on the eastern boundary lies at 45m AOD and rises up on a gentle slope to 53.21m AOD on the south-western boundary.

Ecology

There are no sites with nature conservation designations on or overlapping with the site. Hedgerows are considered to be the most important habitats on site and the existing ponds are currently of poor quality. There is limited tree cover. There is limited habitat on site for reptiles and amphibians. Bats were recorded along hedgerows, but no roosts have been found. Barn owls were recorded at the edge of the site and are known to use nearby habitats. There are two ponds on site which support wildfowl and are of poor habitat value. These are currently being surveyed for Great Crested Newts.

Geo-technical and Geo-environmental Ground Conditions

Extensive site investigations have been carried out at the site. The underlying geology is Glacial Till with ground conditions generally comprising competent cohesive strata to a significant depth beneath the site.

The materials present are suitable for placement of foundations for the proposed housing development and construction of associated development infrastructure.

The ground conditions are not contaminated in respect of future site users or controlled water.

A former landfill, part of the Maw Green Landfill Site, is present in the north-east area of the site. The landfill operations have been completed and the area capped and fully restored with landfill gas and leachate management systems in operation. Housing will not be constructed on this area due to engineering difficulties and landfill gas issues associated with development. The site however can be utilised as Open Space where these issues are not significant and can be suitably managed.



The species-rich hedgerow



Small pond on site



Larger pond on site



Barn owl habitat adjacent to the site

Landscape and Visual

There are no statutory planning designations attached to the site. The site sits outside the Green Gap and has no conservation or heritage designations attached to it. There are no public rights of way running through the site. Coppenhall East residential development (650 units) was approved in October 2011 and connectivity to this site has been considered in the appraisal.

Views into the site are restricted predominantly to close distance views of properties directly overlooking the site on the west, south and north-western boundaries. There are views from the rear gardens of properties along Sydney Road which directly abuts the site. These have long distance views over to the Pennine Hills and Mow Cop, but their near distant view is dominated by a landscape with significant urban fringe elements including the landfill site, tiers of pylon lines and towers and the steel gantries of the railway line.

Views into the site from public footpaths are limited. There are two isolated mid distant glimpsed views into the upper western slope from two footpaths east of the railway line, some 0.5-1km away. There is a limited view from the footpath which runs alongside the landfill site lagoons. However the predominant feature in view is the extensive landfill site which dominates the landscape.

Landscape Character

The site lies within the Landscape Character Type – East Lowland Plains (ELP5). The large urban centres of Northwich, Middlewich, Sandbach and Winsford dominate this character area, which extends from Northwich south as far as Crewe. This is a predominantly flat, large scale landscape with relatively few hedgerow trees or dominant hedgerows. This combines with the low woodland cover typical of the type to create an open landscape with long views in all directions to a distant skyline. Woodland is limited to a handful of copses and coverts. The absence of high vegetation and the open nature of the surrounding landscape allow large structures to intrude over a very extensive area.

The site itself is characterised by low lying, irregularly shaped fields grazed by horses. There is an absence of high vegetation, with urban fringe elements including two overhead power lines and the railway line with overhead gantries traversing the landscape and diminishing the area’s rural character. The most significant feature in the landscape is the landfill site which dominates the setting.



Figure 4.2 Landscape Planning Designations



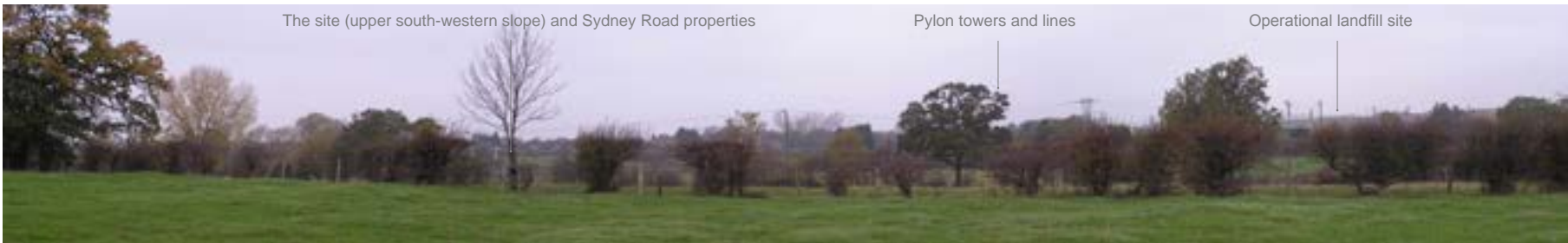
View from the western boundary of the intrusive urban elements which include pylon lines, steel gantries of the railway line and the active landfill site on the skyline. The landfill forms a natural screen and contains the area.



View from Maw Green Road of the northern parcel.



View of northern section of the site adjacent to Groby Road.



View from Public Right Of Way (FP4) approx. 600m distance south-east into the upper western slope of the site and the housing of Sydney Road on the skyline. The landfill site, pylon lines and railway gantries dominate.

Existing Vegetation

The Arboricultural Assessment identified 15 individual trees, 12 tree groups and 15 hedges. The individual trees comprise: Lawson cypress, Weeping willow, Goat willow, Field maple, Ash, Damson and Pendunculate oak. The tree groups comprise: Silver birch, Hawthorn, Leyland cypress, Lawson cypress, Scots pine, Crack willow and Beech. The hedgerow species comprise: hawthorn, blackthorn, dog rose, field maple, guelder rose and dog rose.

Hedgerows form the majority of all the site boundaries with a number of internal hedgerows defining field parcels. There are a limited number of hedgerow trees. Almost all the hedgerows which bisect the site all contain natural breaks which lend themselves to forming site connectivity links. Whilst the hedgerows in general are both structurally and species-poor they do offer screening benefit and containment.

All hedgerows and trees will be retained where possible and will require management and additional planting to improve amenity, screening benefit and habitat value.



Typical species-poor, thin and gappy hedgerows



Over crowded woodland plantation to the northern parcel

Open Space

Cheshire East Council’s Draft Open Space Summary Report:PPG 17, provides an overview of the open space provision and accessibility in Crewe. It identifies ten open space typologies: Parks and Gardens; Natural & Semi-Natural Urban Green Spaces; Green Corridors; Outdoor Sports Facilities; Amenity Green Space; Provision for Children & Teenagers; Allotments, Community Gardens & Urban Farms; Cemeteries & Churchyards; Accessible Countryside in Urban Fringe Areas and Civic Spaces.

For the North-Eastern area of Crewe, within which the site lies it concludes the following:

- Public rights of way provision is strongest on the north-east but is not necessarily accessible in terms of linking routes. Connectivity between the urban area and surrounding countryside is poor.
- Good access to school outdoor sports facilities (Sir William Stanier) but a general deficit of municipal sports sites with a need for additional and accessible pitches.
- A deficit of amenity green space - that which exists is predominantly of poor quality.
- A severe deficit of play provision for children, particularly teenagers.
- A deficit of allotments.
- No Country Park on the edge of Crewe at present.

For the North-Eastern area of Crewe it makes the following recommendations:

- Improve access to natural green space.
- Secure play provision for teenagers to address the deficit.
- Investigate the provision of Country Park facilities alongside the expansion plans for Crewe.

It acknowledges the recent Coppenhall East application and provision for public open space and allotments.



Figure 4.3 CEC Draft Public Open Space Survey - North-Eastern Crewe

Transport

The existing site is located to the north and south of Maw Green Road and to the east of Groby Road (northern site) and Sydney Road (southern site).

Maw Green Road is a local distributor road of varying width, but generally between 5.5m and 7m; there are no central road markings aside from those on the approach to the junction with Sydney Road, thus although the road is lit and subject to a 30mph speed limit, it gives a rural feel as it extends away from the urban edge.

Maw Green Road has a limited length of footway along the southern edge from its junction with Sydney Road of some 1.5m to 1.8m width – this becomes a grassed verge to the rear of no.7 Maw Green Close; the northern edge of Maw Green Road is grassed verge of varying width, but generally around 1.5m; there are no footways currently passing along the site frontage.

To the west of the development site, Maw Green Road meets Sydney Road at a priority T-junction, forming part of what is effectively a double staggered T-junction arrangement with Maw Green Road/Sydney Road/Elm Drive forming the southernmost stagger and Elm Drive/Remer Street/Groby Road forming the northernmost stagger. Both staggered T-junctions are ghost-island arrangements with three back-to-back turning lane facilities along Sydney Road/Remer Street.

Remer Street/Sydney Road is a very busy single carriageway (S2) local distributor road running around the eastern side of Crewe and connecting the A534 with the A530. As a result, significant queuing occurs along Maw Green Road during both the morning and evening peak periods; queuing occurs along Groby Road to a lesser extent.

This priority junction arrangement is being improved significantly as part of the Coppenhall East development proposals, with provision of a new large roundabout which will reduce future queueing and delays significantly along Maw Green Road and Groby Road.

Further afield, the signalised railway bridge (one-way operation) to the south on Sydney Road queues significantly during both the morning and evening peak periods, indicating that it is at practical capacity in the current year. The signals currently operate on vehicle actuation.

Walking Distances (from furthest parcel of land on the southern site)

- To nearest bus stops - 400m
- To nearest shops - 850m
- To nearest accessible public open space - 1450m
- To nearest play area - 1450m



Figure 4.4 Sustainability Connections

Noise

A noise and vibration assessment was undertaken to assess the suitability for residential end use. This has been carried out based upon measured noise and vibration levels from an on-site survey. Consideration has been given to the main surrounding noise sources; railway, roads and the Maw Green landfill site. A noise modelling exercise has been carried out to assess the noise levels across the entirety of the site. The results have been compared to national planning guidance (Planning Policy Guidance note 24 – Planning and Noise and British Standard (BS8233 - design standards for internal living and resting noise levels). Appropriate site layout and consideration of the building design has been included within the master plan. This has included a set back distance of 70m from the rail line and specification of glazing and ventilation to ensure internal target noise levels are achieved.

Based upon a worst case monitoring location, vibration levels have been monitored at the site and assessed in accordance with BS 6472 and BS 7385. It has been found that building vibration levels are well below acceptable levels in the proposed residential buildings. This assessment has concluded that suitable internal noise and vibration levels can be achieved for the proposed development and that the site is suitable for residential end use.

Air Quality

An Air Quality Assessment was undertaken to consider odour and dust levels across the site as a result of emissions from the Maw Green Lane landfill, assess the suitability for residential end use and define any required mitigation strategy. Potential air quality impacts as a result of the development were also identified and assessed.

Information on the operation of the landfill, complaints record and prevailing weather conditions was used in a risk assessment of potential dust and odour effects at the proposed development. Based on the collected information, it is considered that emissions may cause impacts when certain activities and meteorological conditions combine. However, due to the relevant management procedures in place at the landfill and the prevailing wind direction, it is not anticipated these will occur for a significant proportion of the year. It is considered that natural phasing of the development and also predicted build rates will provide some mitigation for potential impacts as the plots closest to the landfill are anticipated to be the last constructed. As such, the length of cross over time between occupation by new residents and closure of the landfill is likely to be limited.

During the construction phase of the proposed development there is the potential for air quality impacts as a result of fugitive dust emissions from the site. A risk assessment was undertaken to consider the likelihood of effects at sensitive receptors and suitable mitigation measures identified to control impacts to an acceptable level.

Potential air quality impacts may occur as a result of exhaust emissions associated with vehicle trips generated throughout the operational phase of the development. An assessment was therefore undertaken to quantify pollution levels both with and without the proposals. Impacts on air quality were not predicted to be significant at any location within the vicinity of the site.

The results of the Air Quality Assessment indicate that due to the proposed development phasing and build rates, new residents will not be subject to significant loss of amenity during the operational phase and the site is therefore suitable for residential usage. Additionally, potential impacts on existing air quality at sensitive locations are not predicted to be significant.

Archaeology

A desk-based archaeological assessment noted that the site largely lacked evidence for previous occupation at any period, there being no Heritage Assets, whether designated or not, to be affected by proposals. Much of the site had already been affected by landfill, ploughing or modern development. Only along the Groby Road frontage was there a possibility of remains surviving related to previous occupation.

As a result, the CWAC advisor to the LPA, in a limited conditional response, has recommended that the 20m-wide strip along the Groby Road frontage be covered by a watching brief during soil stripping and foundation digging.

Flood Risk and Drainage

The site is not shown to lie within the fluvial floodplain on the Environment Agency’s indicative flood maps and this is supported by more detailed on-site assessment, which has confirmed that the site is not at risk from the small unnamed ordinary watercourse, a tributary of the Fowle Brook, running along the eastern boundary of the proposed southern plot. The existing site is greenfield and as such is not currently served by the public sewerage system.

The local ditch and watercourse system has been heavily modified from natural drainage paths as a result of agricultural land boundaries and more significantly the landfill operation to the north of the proposed development area. The ordinary watercourse draining the site continues through the landfill site in culverted form (600mm diameter pipe evident from Maw Green Road) and discharges to the Fowle Brook approximately 400m north of Maw Green Road. The Fowle Brook flows to the north and toward Elton Flashes Nature Reserve approximately 2.5km north of the site.

Flows to this section of watercourse are limited by the relatively small catchment area draining to this location (approx 1km²) and as a result of the 600mm diameter culvert beneath the railway line upstream of the site, which effectively limits inflow to the west of the railway line. Historic flooding from the unnamed watercourse has been reported in this locality, although this is understood to be linked to restrictions in culvert capacity beneath Maw Green Road which have subsequently been remedied through the installation of a 600mm road culvert. The existing southern plot contains low lying land, below the banks of the watercourse, and is subject to ponding of surface water generated from the site during prolonged wet weather.

The northern plot is drained by a ditch on its northern boundary and via a filter drain around the former landfill section of the site, which discharges to the unnamed watercourse downstream of Maw Green Road around the location of the landfill access.

Socio Economic Context

Crewe today is one of the largest and most economically important places in Cheshire East. It is home to one-third of Cheshire East’s residents, around 5,000 businesses and provides employment for some 60,000 people. Crewe has attracted many of Cheshire East’s largest employers including Bentley, Bombardier and Fujitsu.

It is considered a key ‘gateway to the North’ and also links the North West region, in terms of businesses and communities, to the Midlands, London the wider South-East and beyond. The quality of the area’s strategic transport connections, and through these it’s accessibility to the rest of the UK, is one of the town’s major economic strengths.

Due to major industrial restructuring in the 1990’s, which included the privatisation of the railways and significant losses of heavy engineering jobs, Crewe suffered a drop in its GVA (Growth Value Added) and hit its economy. Manufacturing, once a major economic strength, has contracted, however this has been counteracted by job gains in the banking, finance, transport and communications sector. A new framework to support Crewe and its future economic development has been adopted by Cheshire East Council.

This is called ‘All Change for Crewe’ - a strategy to deliver an ambitious strategic framework for economic growth over the next 20 years.

The strategy intends that by 2030 Crewe will be:

- a nationally significant centre with a population of over 100,000
- one of the leading centres for advanced engineering and manufacturing in England, and
- a sought-after place in South Cheshire for people to live, work and settle

In parallel with this the Council has signed up to a Sub-Regional Strategy - ‘Unleashing the Potential’ which envisages a ‘super-charged Crewe’ with a 25% increase in jobs and population.

In terms of delivering on the ‘All Change for Crewe’ Strategy, the Council are seeking to:

- Deliver a vibrant and competitive town centre
- Develop Basford, which lies close to the site, as a regionally significant investment and employment location
- Support significant population growth and enhancement of the area’s housing offer through fully integrated urban extensions that are well served through public transport and mainstream service provision

It has been stipulated by the Council that to meet the expected growth of housing demand in Crewe the town is able to offer a full range of choices for housing which is capable of attracting workers in the industries upon which Crewe will increasingly depend.

Local Facilities

The site is within good walking/cycling distance of a number of local services and facilities.

A local facilities audit, undertaken using Promap IQ, has identified a significant number of local services and facilities within walking and cycling distance of the site. The site lies immediately adjacent to Coppenhall, which comprises a range of local services and facilities including a Primary and Secondary School and local convenience shops. The nearest shops are located on Elm Drive, which is within 500m of the application site.

Within 2km of the application site the following facilities can be found:

- Doctors Surgery
- Dental Surgery

- Food Retail
- Newsagents
- Nursery, Primary and Secondary Education
- Library
- Public House
- Post Office
- Take-Away Outlets

Further facilities can be found in Crewe Town Centre which is approximately 2.5km from the application site. Crewe Town Centre provides a full range of services and facilities, including a University and a wide range of employment opportunities. There are also a number of vibrant business parks on the edge of Crewe which provide a significant number of jobs, including Bentley. Some of the business parks can be reached by walking or cycling.

The site is also within walking distance of a number of bus stops, the nearest of which are located on Remer Street and Sydney Road. These bus stops are within 200m from the centre of the northern parcel of land and around 400m from the centre of the southern parcel of land. There are also bus stops located on Elm Drive which are approximately 500m from the application site. These bus services provide a 30 minute service Monday to Saturday to and from Crewe Town Centre and an hourly service on Sunday and Bank Holidays.

The nearest railway station is located 2.5km from the application site. The railway station is located on the West Coast Mainline which provides a regular service to London and Glasgow and major destinations in between. The station also provides routes to Shropshire and Wales.

In terms of cycling, there is an existing Sustrans cycle route running along Elm Drive from its junction with Remer Street/Sydney Road, into Crewe Town Centre. The route is designated as a traffic free route on the Saturn website. In addition, as part of the Coppenhall East proposals, a footway/cycleway is to be provided through the site in order to deliver connectivity between the residential dwellings and the local facilities. The Maw Green Development will link to these proposals across Groby Road, via a footway / cycleway link at the north end of the northern parcel of land. The development has also been designed to allow connectivity with the adjacent land to the south-east should this site come forward in the future.

Summary

This section has provided an appraisal of the background, history and context of the site and setting. It has highlighted important elements of both the site and surroundings with regard to landscape, movement, connections and facilities.

Local Built Character

There are no existing buildings on the site. To the western boundary, along Sydney Road, are a row of bungalows constructed with red brick and concrete roof tiles. A new residential development has been built on the corner of Sydney Road/Maw Green Road which are 2 storey detached dwellings constructed with multi-red brick, yellow brick quoins and sills and concrete roof tiles.

To Maw Green Road there are a few detached and semi-detached early 20th Century properties of red brick construction with bay windows and slate roofs.

To Groby Road there are a row of semi-detached 1930's houses opposite the site constructed with multi-red brick with upper floor render and slate roof. To the corner of Groby Road/Sydney Road is a 19th century red brick coach house. Maw Green Farm house is a detached multi-red-brick dwelling set back from the road.



Chalet Style - 1970's Bungalows on Sydney Road

Low density, single storey (some dormers) of red brick and render. Open frontage lacks boundary definition.



New development - Corner of Maw Green Road/Sydney Road

Staggered frontage, multi-red brick with yellow brick quoins. A mix of boundary walls and timber fencing creates a barrier to the streetscape and presents a disjointed frontage.



1930's semi-detached - Groby Road

Formal frontage, attention to detail - stone door arches in 'Arts and Crafts' style, bay windows, ornate roof tiled ridge, well proportioned. Some original metal window frames but many replaced by PVC. Front gardens have been predominantly converted to drives and a mix of boundary treatments leads to disparate streetscape frontage.



1950's semi-detached - Remer Street

Formal frontage, reduced detail with mix of bay windows and porches. Front gardens have been predominantly converted to drives with a mix of boundary treatments which creates a disparate frontage. Wide spaced street trees provide leafy streetscape.



5. Evaluation

- Local Built Character
- Historic Built Character Appraisal
- Design Prompts
- Site Opportunities

Historic Built Character Appraisal



Post War 1950’s - Cherry Tree Drive
Positive hedge frontage, open space with no purpose, poor rear fence interface.



Post War 1950’s - Elm Drive
Streets named after tree species, representative of the leafy suburb. Mix of front garden boundary treatments results in disjointed, poor quality streetscape. Open grass verges are blank canvases lacking function or definition and many cars park on them degrading the character.

Garden Suburb

Key Characteristics include:

- Tree-lined streets
- Curvilinear street layout
- Red brick with decorative banding
- Open grassed street space with no function or attraction

Design Prompts:

- 21st Century Garden Suburb taking the positive elements of design
- Ensure well-proportioned, tree lined streets
- Active frontages with consistent boundary treatments
- Create high quality, overlooked, attractive and functional green spaces



19th Century Semi-detached Terrace - Remer Street
Porch frontage, shared driveways to back garden.



Victorian Terrace - Ford Lane, South Coppenhall
Fronting onto the Cemetery providing a green, leafy setting. Character frontage with unified boundary red brick with decorative blue brick banding, stone sills and mouldings, bay windows, slate roof and chimney feature.

Victorian Terraces/Semi Detached

Key Characteristics include:

- Tree-lined streets
- Character frontage with consistent rhythm
- Red brick with decorative banding
- Small, square ornamental front gardens with low red brick walls, gate piers and blue brick coping
- Shared driveways

Design Prompts:

- Consistent, character frontage, porches or bay windows with unified boundary treatment and tree lined streets



Late Victorian, 1930’s bungalow - Groby Road
Proportioned frontage, steep roof, feature chimneys, driveway parking.



Late Victorian, 1930’s semi-detached - Groby Road
Formal frontage, attention to detail - stone door arches in ‘Arts and Crafts’ style, bay windows, ornate roof tiled ridge, well proportioned. Front gardens have been predominantly converted to drives and mix of boundary treatments lead to disparate streetscape frontage.

Late Victorian

Key Characteristics include:

- Enduring style, combining function and beauty with sense of restraint
- Craftsmanship
- Steeper roof pitch and feature chimneys
- Red brick typical of the area with rough cast render
- Characterful frontages - consistent rhythm

Design Prompts:

- Create strong sense of place through architectural detailing, use of traditional building materials i.e. red brick with render, and steeper roof pitch and well-designed garden frontage with integral off road parking

Site Opportunities

Overall there is a real potential for the site to provide a high quality development that benefits the existing community in addition to its residents.

The following points provide a summary of the site assessment:

Land use

- Utilise positive elements of existing residential development and landscape character to create a design that responds to the surrounding context
- Provide significant improvement in the availability of accessible open space for informal recreational use and formal play

Visual Amenity

- Retain long distance views of Mow Cop and the Peak District from the upper western boundary, whilst providing screening and significant visual enhancement of the immediate surroundings which are currently blighted by the operational landfill site, railway line and steel gantries on embankment
- Development layout to work carefully with the sloping nature of the site
- Dwellings on the upper western slope to be 1-1.5 storey bungalows to retain existing views from the bungalows of Sydney Road abutting the site and to complement the existing built form

Landscape and Ecology

- There is one species rich hedgerow on site, the rest are species poor with very limited tree cover. All existing hedgerows should be retained and enhanced with additional native tree and hedgerow planting to maintain and enhance the landscape character and improve habitat diversity
- Provide a green infrastructure to the development to integrate it into its setting and provide a high quality range of public open spaces
- Explore how Sustainable Urban Drainage Systems can be integrated with public open space to manage additional surface water run off

Access and Movement

- Maximise the opportunities to create new foot and cycle connections that are integrated with the existing footpaths, cycle routes and the proposed public open spaces of the Coppenhall East development to create a linked green space network
- Provide traffic calming measures along Maw Green Road to provide suitable access capacity and deter through traffic using Maw Green Road as a rat run
- Look at providing new footpath access along both sides of Maw Green Road and Groby Road
- Improve existing bus stops with the provision of bus shelters, seating and timetable information



Aerial view from south-east corner



Figure 5.1 Site Opportunities

Consultation

Public Consultation

A pre-application Public Consultation event was held on Friday 27th January 2012 from 4.00pm -9.00pm at Sir William Stanier Sports Centre, a venue close to the site. Attendees were encouraged to fill in a comments form and further information was made available on the project website, mawgreen.co.uk where the public also had the opportunity to submit further comments.

Leaflets were sent to local households two weeks prior to the consultation being held informing people of the public consultation date, location and an outline of the proposals. Leaflets were also sent to local councillors and schools. The website address was provided to enable residents to comment on line if they were unable to attend the event.

An advert for the exhibition was placed in the Crewe Chronicle newspaper on the 18th January and in the Crewe Extra on the 20th January 2012.

The exhibition comprised 8 boards which provided a description of the site and its context, features of the site (including the identification of constraints and opportunities), a vision and concept plan, a draft master plan/landscape master plan with 3D images, more detailed assessments of landscape and transport and a full list of the technical surveys undertaken. The issues that were mentioned are set out below.

The exhibition was well attended, it is estimated that around 65 members of the public visited the exhibition, almost all of whom benefited from a conversation with one of the design team or the applicants' representatives.

There were positive responses and support of the development in response to:

- Provision of open space and play facilities
- Improvements to drainage and flooding
- Planting to the site boundary
- A scheme that would be beneficial to the area
- Housing types which were 2 storey (as opposed to 3 storey town houses or apartments) and at a lower density than expected
- A significant number would be interested in receiving details if planning is approved

A significant number of general comments on:

- Flooding issues to Maw Green Road
- A requirement to see more detailed planting proposals
- The current traffic congestion to Sydney Road
- A preference for a small group of bungalows adjacent to the south-western boundary to retain the views currently afforded to the existing Sydney Road bungalows
- A reassurance that gas from the landfill site is not an issue
- A requirement for some bungalows to meet the aging population need



6. Consultation

The applicant and their team have sought to involve stakeholders and the public throughout the formulation of the development proposals. This section summarises the events and meetings that have been held.

This section refers to the consultation undertaken which included:

- Public Consultation
- Stakeholder Consultation
- Crime Prevention

There were a number of objections in response to:

- Open Space and play facilities not being welcomed
- Planting not necessary
- Increased traffic volume generated by the development
- Impact upon current property values
- There being no need for any more houses in Crewe

The Statement of Community Involvement document which accompanies the planning application provides further details of the public consultation.

Response to the Public Consultation

Following the public consultation event amendments were made to the scheme to take on board both formal feedback and informal feedback via discussions at the event. These amendments are detailed below. Amendments have also been made to the scheme as a result of a small parcel of land in the north-west corner of the site being removed from the application site. In addition, following value engineering, the two attenuation ponds have been reduced in size. The master plan has subsequently been revised taking all of these factors on board and the revised number of dwellings proposed has been reduced from 167 to 165 dwellings.

Crime Prevention

Pre-application discussions were held with the Cheshire East Crime Reduction Advisor. She viewed the layout favourably and felt there were no issues in terms of natural surveillance and layout. Specific comments were as follows:

- There is a good sense of community to the scheme which is very important
- The layout allows for active interfaces of all streets, green link footpaths and Public Open Spaces
- Hedgerows to the fronts of gardens to be a maximum 1m high for natural surveillance
- There are no reported problems with scrambling/motorbikes on parks in Crewe. However it was agreed that staggered wooden barriers would be proposed to the green link footpaths, and where the emergency vehicle access route is proposed off Groby Road this would be gated since keys are kept with all the emergency departments. It was agreed that the vehicular access to the POS would be gated and staggered barriers/fencing erected at the footpath entrance points
- A few bungalows to the western boundary would improve the mix of tenures
- Lighting would be required for the green link footpaths
- Dog bins and litter bins to be provided
- The ‘Safer Route to School’ proposal was favoured with the request for a crossing point by the main footpath link on Groby Road

Stakeholder Consultation

The developer and the consultant team have undertaken a series of pre-application meetings with officers at Cheshire East Council, and followed these up with further discussions and consultation with the relevant statutory bodies. Key discussions have taken place regarding the landscape led approach, provision of open space linkage, the mix of tenures, the transport strategy, the former landfill site constraints, ecology, drainage and appropriate mitigation measures.

Pre-application discussions have also been held with the South Cheshire Chamber of Commerce who support ‘in principle’ the proposal, subject to the inclusion of highway and environmental improvements outlined. They consider the development addresses the needs identified in the ‘All Change for Crewe’ strategy for the long term economic regeneration of the area and also welcomes both the short and long term economic benefits that will arise from the development.

In terms of drainage the design team are in on-going discussions with the Environment Agency who have no objection to the scheme.

Summary

The following issues have been clarified by the design team and where appropriate, additional work has been carried out to further show how detailed design issues will be resolved or amended. The supporting information submitted with the application will also address the concerns expressed:

- Early and regular consultation with regard to landscape, amenity and open space/sports and play provision has enabled the development to be landscape led from the start of the process. Particular attention has been paid to the technical implementation of planting and play provision to the former landfill site, an integrated green infrastructure to the development and visual enhancement/screening of the operational landfill site.
- Liaison with transport and highways officers from an early stage of the design process has enabled a transport strategy to be prepared that dovetails with the proposed new Coppenhall East roundabout and includes significant S106 contributions towards future highway schemes to mitigate the overall impact of the development on the highway network.
- Early and on-going discussions between the Ground Investigation Consultants, the Land Contamination Enforcement Officer, the Landfill Operators and Landscape Officer have ensured comprehensive mitigation measures to ensure the safety of the former landfill site for public use, the technical constraints attached to native planting, play and sports provision to enhance its amenity value, together with an understanding of future monitoring requirements.
- Early and regular consultation with the Nature Conservation Officer has enabled the development to make a positive contribution to the ecology of the site with particular enhancements to the public open space area.
- The Air Quality assessment has been approved by CEC.
- Consultation with the Environmental Health Officer has ensured the noise assessment has taken on board comments.
- The Archaeological assessment has been approved with a recommendation for a watching brief along Groby Road.

| Consultation Feedback | Our Response |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pedestrian crossing on Groby Road | <p>Following comments received at the exhibition, a zebra crossing is now proposed. The pedestrian crossing will be located to the north of Groby Road and will link the application site to the Coppenhall East Development.</p> <p>The pedestrian crossing should help slow vehicle speeds along this stretch of Groby Road and will provide a safe and direct link to the Monks Coppenhall Primary School. Appropriate signage could also be provided within the site to encourage people to use this crossing and create a ‘Safer Route to School’.</p> <p>Tactile paving and dropped kerbs should also be provided on the arms of the proposed roundabout. This should form part of the detailed design stage.</p> |
| Footway on Groby Road | <p>In response to comments received, a footway is now proposed along the frontage of the application site on Groby Road. This will run as far south as the new footway provision on the opposite side of the road, which is provided within the Remer Street/Sydney Road roundabout proposal, as far as the boundary of No.10 Groby Road. The footway will link with the proposed crossing detailed above.</p> |
| Views from properties on Sydney Road will be adversely affected | <p>To address comments made by residents on Sydney Road, the 5No. 2 storey units originally proposed on land to the rear of these properties have been replaced with bungalows/chalets. These will have dormer windows to the front and velux windows to the rear. In addition, garages have been relocated away from the boundaries.</p> |
| Road surface needs to be improved along Maw Green Road | <p>As part of this application the road surface along the length of the application site will be improved and a footway will be provided. The road surface between the site access and the new roundabout at Sydney Road will also be improved. No improvements will be made to the road surface to the east of Maw Green Road Railway Bridge because this is not related to this development and will not be beneficial.</p> |
| Flooding at the Railway Bridge | <p>There is an existing localised flooding issue at the Railway Bridge. This has nothing to do with this application. Notwithstanding this, the applicants will investigate the matter and report back to the Council what the problem is and the potential solution.</p> |

Design Principles

The quality of any development is inherently dependent on a high quality of design from the master planning scale down to the detail design of architectural form, structure and materials. The planning and design of the residential development has been based upon the Manual for Streets guidance and The Urban Design Compendium (EP and Housing Corporation).

It demonstrates a high standard of design at all levels to ensure a positive contribution to the visual quality of the environment and to ensure an enhanced quality of life for residents.

Master Plan

The draft master plan illustrates how the principles of the concept plan has been developed to create a high quality, sustainable residential development with character and a real sense of place. It will provide up to 165 homes.

The development has been designed to provide:

- A mix of tenures and dwelling types
- Active frontages for natural surveillance, to enhance the existing housing character and as an intentional design mechanism to reduce car speeds to a safe standard
- Avenue street trees to enhance the quality and residential nature of Maw Green Road, Groby Road and the internal streets to the development
- Streets designed as places, which are safe, attractive and establish a sense of community
- A 'Walkable Neighbourhood'
- Layout designed to encourage low traffic speeds, utilise shared surfaces wherever possible and reduce the dominance of cars on the street scene
- Integrated green infrastructure incorporating existing hedgerows, substantial native planting with a net gain in hedgerow length, wildlife corridors, pedestrian routes and sustainable urban drainage
- Significant infrastructure planting to enhance the landscape character and screen/soften views of the operational landfill site to the wider community
- Creation of a range of character areas to the development
- Significant and meaningful areas of Public Open Space providing for informal recreation, formal play and ecologically rich habitats which are accessible to all
- Nature Reserve with undisturbed and minimally managed habitats, interpretation boards and specific provisions for key wildlife features including barn owls

- Green links overlooked by houses for natural surveillance and to provide a greater sense of security
- Village ponds located at the heart of the development as a focal point, balancing surface water collection and providing a species-rich wetland habitat
- Site drainage to include SuDS (below drainage pipes, porous paving, vegetated swales and 2 attenuation ponds with permanent wetted margins) to control surface water flows and provide treatment of water quality before discharge to adjacent watercourses - in accordance with good practice the development will not increase surface water runoff



7. Design Response

- Design Principles
- Master Plan
- Design Rationale - Density, Dwelling types and tenures, Scale and Heights, Layout
- Street Design
- Transport and Movement
- Landform, Ground Modelling and Drainage
- Community Safety
- Sustainability
- Landscape Design Strategy
- Ecological Strategy

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Aerial view from south-east corner



Master Plan

- Site area of 23.7 acres
- Net developable area = 13.33 acres
- Areas of Public Open Space = 10.37 acres
- High quality sustainable development creating a place of character and identity
- 'Green spaces for all'
- A 'Walkable Neighbourhood'
- Significant and meaningful green spaces to serve the development and wider community
- Streets designed as places
- Layout to encourage low traffic speeds
- Safe and secure with a sense of community where people want to come and live

Schedule of Accommodation

The mix of tenures and dwelling types reflected in the illustrative master plan are as shown below, however the reserve matters will determine the precise mix.

Private Dwellings

| | | |
|---------------------------------------------------------|----|----|
| 2 Bed semi-terrace dwelling @645 sqft | 3 | No |
| 3 Bed detached-semi dwelling @830 sqft | 27 | No |
| 3 Bed detached cranked dwelling @845 sqft | 3 | No |
| 3 Bed detached dwelling @945 sqft | 8 | No |
| 3 Bed detached dwelling with integral garage @920 sqft | 3 | No |
| 3 Bed detached dwelling @985 sqft | 11 | No |
| 4 Bed detached dwelling with integral garage @1165 sqft | 4 | No |
| 4 Bed detached dwelling @1251 sqft | 15 | No |
| 4 Bed detached dwelling @1395 sqft | 12 | No |
| 4 Bed detached dwelling with integral garage @1412 sqft | 5 | No |
| 4 Bed detached dwelling @1650 sqft | 5 | No |
| 4 Bed detached dwelling @1685 sqft | 3 | No |
| 4 Bed detached 2½ storey dwelling @1665 sqft | 2 | No |
| 2 Bed detached bungalow @870 sqft | 2 | No |
| 3 Bed detached dormer bungalow @1125 sqft | 2 | No |
| 3 Bed detached bungalow @1210 sqft | 2 | No |

Total Private 107 No

Affordable Units

| | | |
|---------------------------------------------------------|----|----|
| 1 Bed 2 person semi @550 sqft | 4 | No |
| 2 Bed 4 person semi/terrace dwelling @730 sqft | 40 | No |
| 3 Bed 5 person detached-semi-terrace dwelling @830 sqft | 7 | No |
| 3 Bed 5 person semi-detached cranked dwelling @845 sqft | 4 | No |
| 4 Bed 6 person semi-terrace dwelling @1145 sqft | 3 | No |

Total Affordable 58 No

☆ Affordable units
★ Rented units

Grand Total 165 No

Figure 7.1 Masterplan



Design Rationale

Density, Dwelling Types and Tenures

The overall average density is about 30 dwellings per hectare, with regard to the nature of the site characteristics and constraints and the desirability of achieving a high quality, well-designed scheme.

The development comprises 165 units of which 35% are affordable homes. Of this 75% are affordable and 25% are rental. The development includes a mix of dwelling types and tenures, designed to reflect the needs and aspirations of the local community and to meet the affordable housing needs set out by Cheshire East Council.

Private dwellings total = 107

Affordable units total = 58

The northern section of the site accommodates 82 units, of which 44 are affordable (9 of which are rental). The southern section of the site accommodates 73 units, of which 14 are affordable (4 of which are rental).

Scale and Heights

A variety of building scales will define the streets and open spaces, assisting with the legibility and identity of the development. This strategy has been formed with regard to providing a sensitive response to the visual impact of the development and ensuring primary open spaces and movement routes are contained and overlooked. There is a mix of semi-detached, terraced and detached dwellings, with either on plot parking, integral garage or detached garage.

Most dwellings will be 2 storeys, with a group of 1 storey and dormer bungalows in the south-western corner of the site and a couple of 2½ storey exclusive dwellings off Groby Road.

The dwellings have been orientated to make a positive contribution to the streetscape, with key buildings located to provide landmarks and gateways to emphasize routes. Typical ridge heights will be about 8.5m for a two storey dwelling, 2½ storey will be about 9m and 4.5m for a 1 storey dwelling,

Layout

- A key focus of the development is good access with the provision of a compact roundabout which links both sites together and allows for good permeability of both sides of the site
- There is a strong site frontage to Maw Green Road. This is a considered design rationale to establish a clear residential presence which will in turn, together with traffic calming, indicate to drivers they are entering a residential area and to reduce their speed
- A welcoming and inviting development which has a sense of place and ownership
- Structured layout, with avenue street trees and integral landscape features provides a high quality setting
- Attenuation ponds designed as natural features which form a focal point
- All dwellings address the street frontage for natural surveillance with book ending at junctions to achieve a maximum street face
- Articulation of street corners to provide focal points within the development
- Creation of a series of self-contained character areas to reinforce a sense of community and a strong neighbourhood
- Affordable units have been integrated into the layout, but centralised to provide ease of management by the registered social landlord
- Layout designed to encourage low traffic speeds, utilise shared surfaces wherever possible and reduce the dominance of cars on the street scene
- A walkable neighbourhood with a network of green link footpaths connecting all areas of open green space and feature ponds

Layout of the northern section of the site

On entering the northern section of the site the primary street swings towards the boundary with the proposed open space to enable good footpath access, with a focal building facing, and then realigns to enable development either side.

To the western side of the street the existing pond has been retained as a wildlife reserve. It is not intended to be open to public use however it will create a strong visual green setting and will be established as an improved wetland habitat.

The balancing pond, framed with native trees and wetland margins is a focal point and positive contribution to the streetscape with all perimeter housing overlooking it. The housing layout to the street is predominantly terraced, with cranked dwellings on returns to retain a consistent street frontage. Avenue trees and off road parking provide a structured, leafy setting.

The primary street serves a number of small secondary, shared surface streets, where dwellings are predominantly detached or semi-detached. A 3m wide green link footpath connects Groby Road to the development, running along the existing hedgerow and connecting up to the pond and the area of public open space.

The street frontage to Groby Road has been designed as an exclusive private drive development serving a maximum of 3 units per access.



Figure 7.2 Masterplan of the southern section of the site





Figure 7.3 Master plan of the northern section of the site

Layout of the southern section of the site

There is a strong street frontage to Maw Green Road and the hedgerow along the boundary with the road is proposed to be cut to a lower height for clear views of the houses.

The primary street has been designed to slow traffic speeds with two shared surface squares forming focal points to the development. Shared surfaces streets have been to emphasise pedestrian priority and reduce the impact of the car on the streetscape.

The attenuation pond is designed as a wetland feature which provides an attractive backdrop to the shared surface square and forms a central focal point to the development. The majority of houses front onto the pond.

Dwelling types consist primarily of detached houses, with a group of semi-detached properties in the south-eastern corner. Parking is all off road with a range of on-plot, integral garage or separate garage.

There is a strong frontage along all streets and areas of public open space and green link footpaths.

A series of character areas have been established responding to the natural topography, existing hedgerows and proposed infrastructure planting, to create a real community setting.

The development to the south-western area of the site has responded sensitively to adjacent residents living in bungalows on Sydney Road who have long distance views from their rear gardens. The development cuts into the existing slope, with a group of bungalows proposed immediately adjacent to the boundary to minimize their visual impact and retain long distance views. In addition a new wide hedgerow with trees is proposed running midway across the slope to provide a green infrastructure and mosaic to the built form and effectively screen out the unsightly lower views of the railway line, gantry and operational landfill site.

The green link footpaths provide good footpath access through the development, following existing and proposed hedgerows, linking up to all areas of open green space. The footpath link along the eastern boundary also provides maintenance access for the existing ditch.

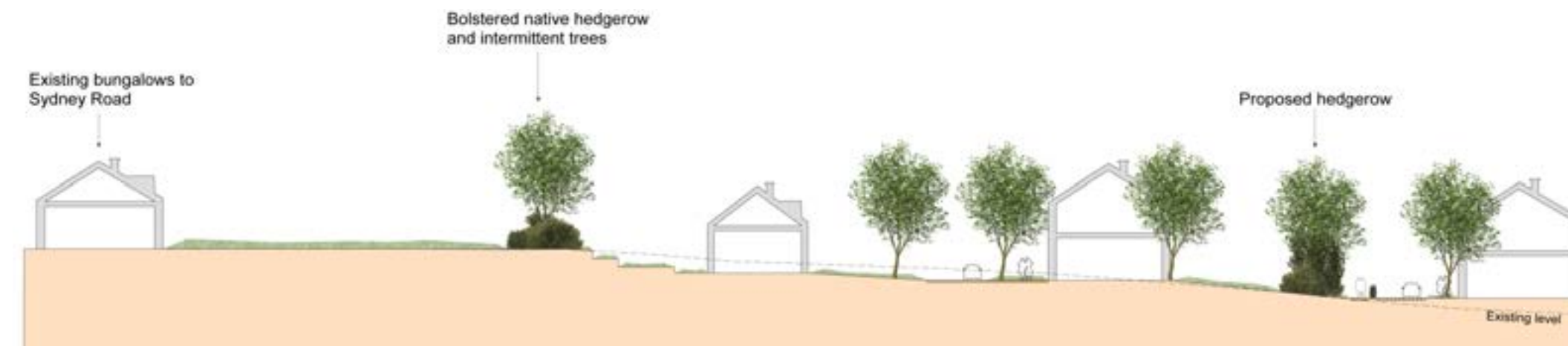
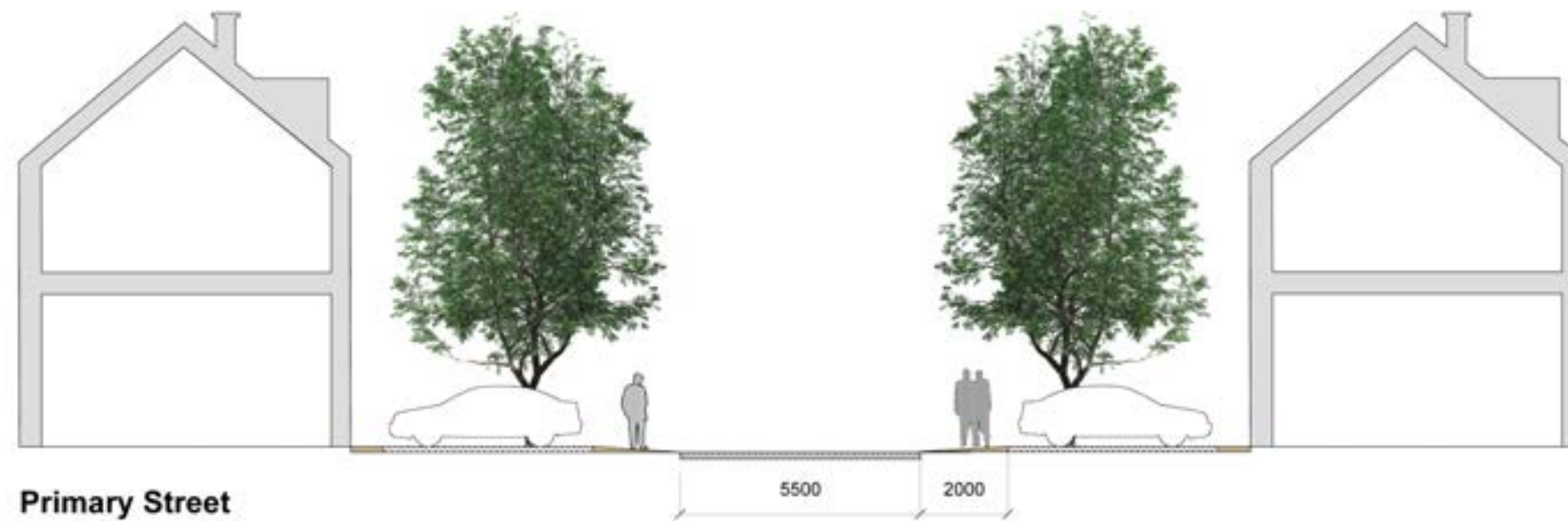
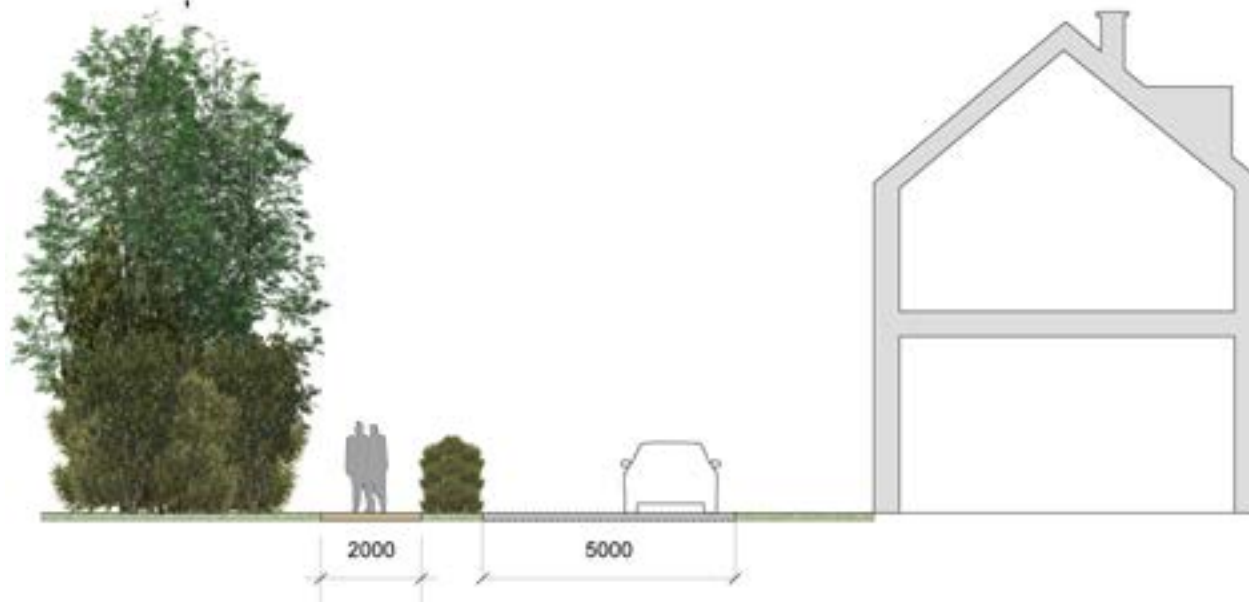


Figure 7.4 Typical cross section through south-western corner of the site

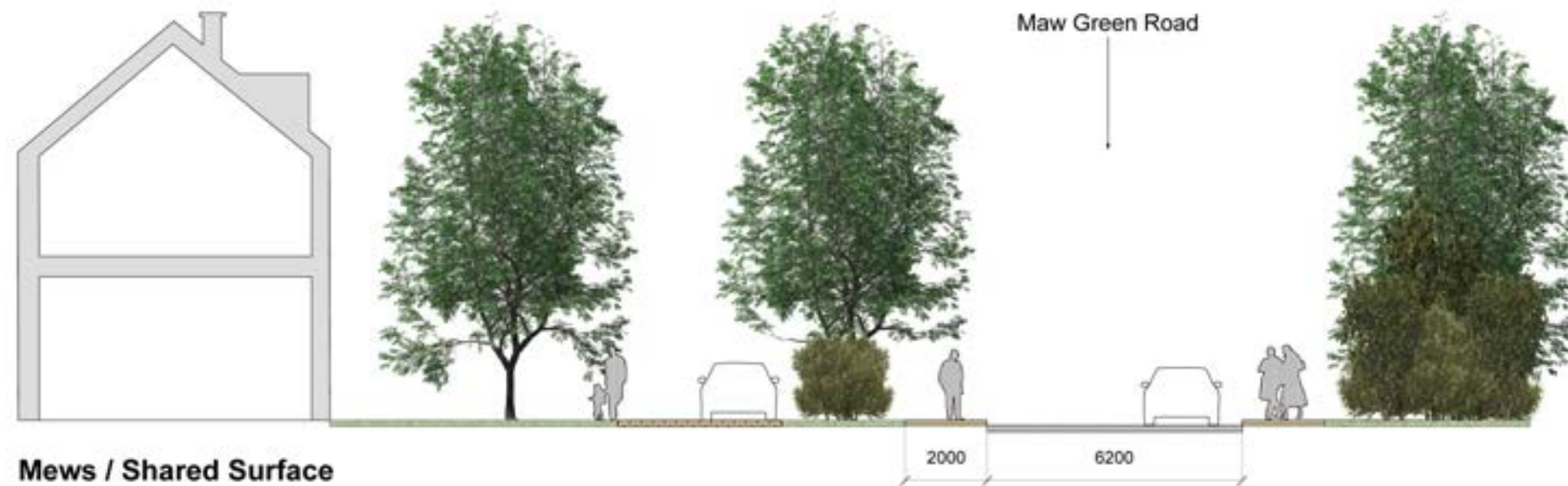


Primary Street

Existing hedgerow



Green Links / Secondary Street



Mews / Shared Surface

Street Design

Streets provide a major part of the public realm in any scheme. A hierarchy of street type is proposed for the development based on the principles of Manual for Streets. Each street will provide an attractive place to live alongside, or to pass through and enjoy.

The proposed street hierarchy fulfils a number of overlapping functions:

- It helps to provide legibility and variety
- It responds to the scale, type of uses and activities that occur along the routes
- It creates a safe and attractive environment with a clear priority to pedestrians and cyclists
- It provides a permeable network
- It makes efficient use of land and applies the concept of multi-use of spaces between buildings

Primary Street

- A more formal character with an avenue of trees to the street frontage
- Footpath either side of the road lined with 2 storey dwellings
- Dwellings provided with on-plot parking
- Active frontages with dwellings facing the street and boundaries comprising a mix of hedges and planting to add a consistent character to the streetscape
- Utilities accommodated beneath footpath or road

Secondary street

- Less formal character, but with some tree planting in front gardens
- Dwellings are 2 storey with variation in the building line and varied building form and styles
- Include a combination of on-plot parking and garages
- Green link footpaths form part of the street scene, overlooked by dwellings for natural surveillance. These footpaths provide good footpath access through the development, following existing and proposed hedgerows, linking up to all areas of open green space
- Utilities accommodated beneath footpath or road

Shared Surface

- Shared surface streets will act as valuable community space for those who live alongside them, with a defined sense of character
- Low traffic flows will allow for safe mixing of transport modes, with a shared permeable, attractive surfacing and pedestrian priority
- Built form mainly 2 storey with a group of bungalows (1 and 1 1/2 storey) to the south western corner
- Include a combination of on-plot parking and garages with utilities accommodated beneath the grass verge frontage

Transport and Movement

A Transport Assessment has been undertaken to determine the impact of the proposed development site on the surrounding highway network, which is very busy during peak periods (particularly Remer Street/Sydney Road and minor connecting junctions).

The primary access to the site will be from Maw Green Road, via a ‘compact’ roundabout layout (agreed with CEC); this will slow approaching traffic along Maw Green Road, providing a calming feature by breaking up the long straight section of carriageway, as well as providing suitable access capacity. Further minor access points to private driveways are to be provided from both Maw Green Road and Groby Road. A signage scheme is also proposed for Maw Green Road to support the downgrading of the route for through traffic, as requested by CEC. The proposed access roundabout also facilitates safer and more convenient pedestrian and cycle movements, ensuring safer access to the POS provision north of Maw Green Road, via the proposed zebra crossing facility.

The development will provide footway connections to the highway network through new footway provision along both sides of Maw Green Road, with a marginal narrowing of the carriageway. This will then tie into the proposed new roundabout junction at Sydney Road, provided by Taylor Wimpey as part of the Coppenhall East development highway contributions. A further footway will be provided along the eastern edge of Groby Road to facilitate pedestrian access to Remer Street/Sydney Road.

As part of the works to tie into the new roundabout junction at Sydney Road, the farm access location is to be relocated to Groby Road, rather than as a minor access onto the roundabout itself. This represents a significant safety improvement at the junction.

The internal footways within the site will provide connectivity through to Groby Road, where a shared footway/cycleway is proposed to connect from the northwest of the proposed development, across Groby Road and through to the Coppenhall East development (and beyond). The closest bus stops to the site, on Remer Street, will be upgraded from flag stops to bus shelters with seating and timetable information.

Further afield, traffic impact across the wider highway network will be dealt with via significant S106 contributions towards future highway schemes, proposed by CEC as part of the Crewe Vision. The package of transport measures provided by the development serve to mitigate the overall impact of the development on the highway network.

Maw Green Road and Groby Road

The development has been designed to create a positive and active interface with these two roads, continuing the character of a residential street with dwellings overlooking them. Existing hedgerows which form the boundary to the site will be cut to a height of 1.2m to allow for clear views of the dwellings whilst maintaining a strong green frontage. This is complemented with avenue tree planting to strengthen the residential ‘garden suburb’ character and reinforce the traffic calming measures by indicating clearly to drivers that they are moving through a residential area where safe speeds should be adhered to.



Maw Green Road looking west towards Sydney Road.



Groby Road looking south towards Sydney Road.



Figure 7.5 Wider highway improvements - proposed new roundabout at Sydney Road, provided by Taylor Wimpey as part of the Coppenhall East development highway contributions and relocated access for Maw Green Farm.

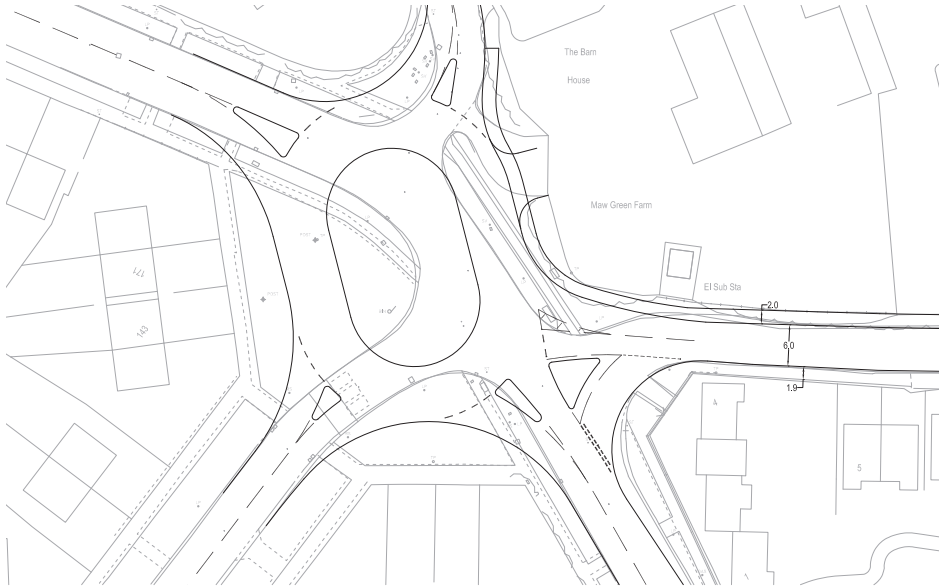


Figure 7.6 - Footpath improvements to Maw Green Road

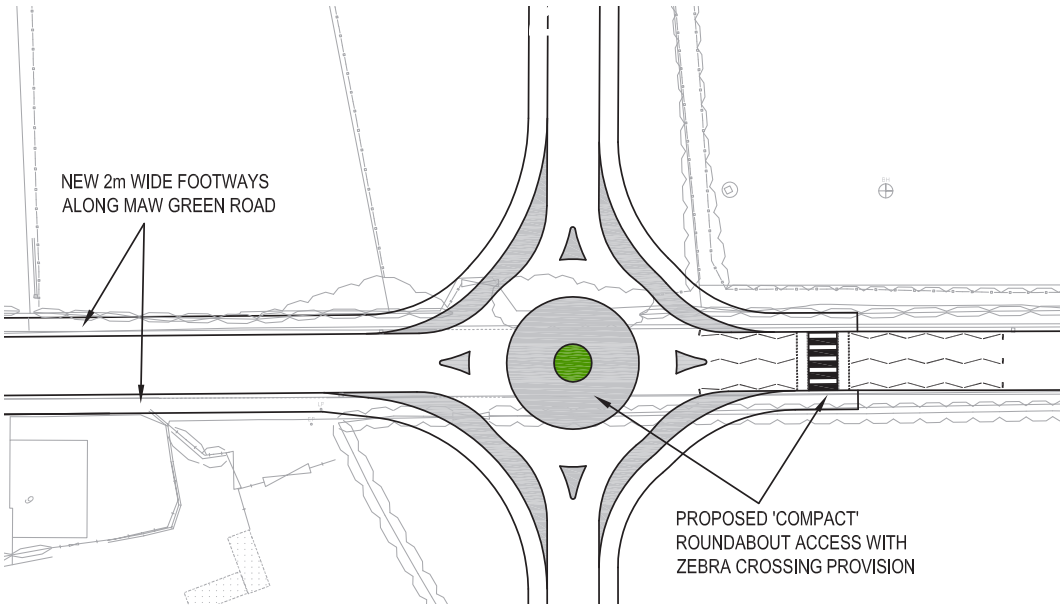


Figure 7.7 - Proposed compact roundabout access with zebra crossing provision

Highway Lighting

Existing street lighting along Maw Green Road and Groby Road will be enhanced in accordance with CEC’s Street Lighting Policy for Zone E3 ‘Areas of Medium District Brightness’.

The streets within the residential development will provide street lighting to adoptable standards in accordance with CEC Zone E3.

In addition the green link footpaths will provide lighting to adoptable standards, taking into consideration the requirement to minimise light spill. The management of street lights will be fully considered within sensitive nocturnal wildlife corridors to maintain their value for bats and owls.

Landform, Ground Modelling & Drainage

Ground modelling

The topography of the site is such that a re-levelling operation will be necessary to provide suitable plateaus for the proposed development. The earthworks operation that is proposed will be mindful of the constraints of the surrounding areas, the retention of important ecological features as well as a need to create a balanced, attractive and easily accessible place for people to be able to move around. The relevant design guidance for designing highways will be incorporated within the design proposals, with minimum gradients achieved to ensure acceptable DDA access.

Also accommodated within the proposals is the desire to minimise the need for any imported material, or the need for any surplus material to be exported off site, as well as limit the need for any retaining structures. An appraisal of the northern development indicates that a balanced cut and fill arrangement can be achieved. For the southern plot the variance in levels is such that there is likely to be the need to import material on to the site, however a more refined analysis will be undertaken during detailed design to minimise this need as much as possible.

Topsoil, which cannot be used as part of any engineered filling operation, will be incorporated within gardens and public open space areas such that no surplus topsoil is required to be removed from site.

Where level changes are necessary to tie in with the surrounding topography and certain key constraints, i.e. Maw Green Road, the levels will be stepped between proposed residential properties to create gradual falls through the site, which in turn will create accessible spaces to all. Where there are more significant levels differences, the gardens will be used to accommodate steeper gradients. Retaining walls will also be considered if necessary. The type of retaining wall construction would be selected based on the height of retaining required and its location, and would be delivered sympathetically to the surrounding area.

Using the most up to date computer software a ground modelling exercise has been completed which has helped inform the master plan. The model for both the northern and southern plots will be refined as the scheme moves forward to secure the most efficient, economic and environmentally positive solution in relation to levels and earthworks.

Drainage

The northern and southern plots of the site will be drained separately, but will both include the use of Sustainable Drainage Systems (SuDS) in the form of porous paving in areas of shared driveways and parking. This will provide primary treatment of surface water derived from these trafficked surfaces through filtration in the stone fill media beneath the paving surface while also providing a significant quantum of attenuation volume. The proposed adoptable section of highway on-site will be drained conventionally using surface water sewers and road gullies, but the drainage from each plot will discharge to on-site attenuation ponds for further water quality treatment and attenuation of design storm events.



Figure 7.8 - Proposed Surface Water Drainage

The landscaped ponds will include areas of shallow permanent water and will be planted with marginal vegetation which will help to provide further quality treatment of runoff derived from the site. Flows from the ponds will be limited to calculated greenfield runoff rates, such as to not exceed existing runoff rates and will discharge to the unnamed watercourse on the eastern boundary of the southern plot with attenuation designed to the 1 in 100-year return period design standard, including an allowance for climate change. The proposed development will not increase flood risk locally and will be designed to be safe from flooding.

Foul drainage from the site will be pumped to the existing gravity sewers in Elm Green Drive and United Utilities has confirmed that the system has capacity to receive such flows.



Examples of species-rich swales



Example of species-rich attenuation pond

Community Safety

Safer Route to School

The proposed development provides safe and convenient internal footway connections between the southern section of the site and Groby Road, including a new formal zebra crossing arrangement on Maw Green Road.

It is proposed that the route to Monks Coppenhall Primary School is signed through the development, connecting to the new Coppenhall East site on the other side of Groby Road; this is highlighted within the Travel Plan report and will be discussed with the school in due course.



Sustainability

Sustainability includes the protection and enhancement of the environment, a prudent use of natural materials, sustainable economic development, social cohesion, equality and inclusion.

The principles of sustainable design and construction will be embedded throughout the proposed development at Maw Green.

To achieve a sustainable development an approach will be implemented based on the Central Government preferred energy hierarchy. In the first instance the most effective way of reducing carbon emissions is to reduce energy demand. This will be achieved both at a site layout level, for example through consideration of the building orientation to utilise solar gain and the use of deciduous street trees to provide summer shading, as well as improvements within the dwellings themselves, such as the building fabric, heating and lighting.

Sustainable Communities

The new development will encourage an inclusive new community through the provision of a range of dwelling types (to meet local needs and to be agreed with the Council). It will be a place with a distinct identity, where people wish to settle:

- The development is located in a highly sustainable location and is within easy reach of a number of local services and facilities all within 2km, an acceptable walking distance.
- It provides permeable and legible access routes through the site, referred to as 'Green Links' linked to areas of high quality public open space to encourage walking and cycling.
- Integrated green infrastructure, to include green space for play and recreation and connections to other public open spaces to encourage an active, healthy lifestyle, as well as biodiversity and habitat connectivity.
- Existing hedgerows and trees to be retained wherever possible and bolstered with additional native planting to protect and enhance existing habitats.
- Substantial areas of native planting and open space will add visual interest throughout the development, integrate the development with the surrounding landscape and enhance its setting and provide areas for play and recreation, promoting physical activity.
- A Sustainable Urban Drainage System to manage surface water run-off, to be designed to have landscape amenity and ecological benefits.

Transport Sustainability

The development site is located within 400m of the nearest bus stops (much of the site is within 300m distance), with services providing around 50 buses per day Monday to Saturday and 9 buses on Sundays.

The following sustainable improvements are proposed:

- New footway connections along Maw Green Road
- New footway along eastern edge of Groby Road
- New formal zebra crossing facility on Maw Green Road
- New Zebra crossing facility on Groby Road
- Upgraded bus flag stops on Remer Street to provide bus shelters with seating and timetable information

The application site is well related in terms of sustainable travel, rail, bus and cycling. The nearest rail station is situated 2.5km from the application site. This station provides a regular service to London and Glasgow and major destinations in between. The station has cycle parking and there are bus and taxi services to and from the station.

The buses that serve the site are located on Remer Street and Sydney Road. Further bus stops are located on Elm Drive. These bus services provide a 30 minute service Monday to Saturday to Crewe Town Centre and an hourly service on Sundays and Bank Holidays. The services operate from 6.30am to 23.15pm Monday to Saturday and from 11.15am to 19.15pm on Sundays and Bank Holidays.

In terms of cycling, there is an existing cycle route running along Elm Drive from its junction with Remer Street/Sydney Road into Crewe Town Centre. The route is designated as a traffic free route. In addition, as part of the Coppenhall East proposals, a footway/cycleway is to be provided through the site in order to deliver connectivity between the residential dwellings and the local facilities. The Maw Green Development will link to these proposals across Groby Road, via a footway/cycleway link at the north end of the northern parcel of land. The development has also been designed to allow connectivity with the adjacent land to the south-east should this site come forward in the future.

Residential Development and Construction

- All grant-funded affordable homes will achieve level 3 of the CfSh as a minimum.
- All private sale homes will be built to Building Regulations Part L compliance.
- Best practice water and waste minimisation and management, including recycling storage.
- Construction to consider the sourcing and specification of materials relative to the Green Guide.

Landscape Design Strategy

Introduction

An attractive well-designed environment which responds sensitively to the site and its surroundings is essential in engendering a successful and sustainable development and establishes the fundamental framework for residents to live, play and socialise.

This Landscape Design Strategy sets out the vision and proposals for a coherent, robust and site-specific landscape framework for the development. It forms part of the outline planning application for the proposed residential development and has been prepared as an integral part of the master planning design process in consultation with the Landscape and Open Space Officers at CEC and the team consultant ground engineers, ecologists, highway engineers, flood risk and drainage engineers, arboriculturalists and planners.

The design evolution of the scheme has embraced the guidance for new developments to provide ‘green infrastructure’ set out by Natural England. The scheme exceeds the recommended minimum of 40% green space and actually provided 50% of the total area comprising areas of retained habitats, created habitats, sustainable urban drainage schemes, gardens, play areas and other landscape amenity areas. The development proposals aspire to provide a high quality, sustainable place for people to live, and these standards have formed the bedrock of the proposals.

Objectives

- Conservation and enhancement of areas of ecological, amenity and landscape value. All new planting to be ecologically and visually appropriate, enhancing and responding to both the nature of the existing landscape and the development proposals.
- Minimal disturbance and loss to all existing trees and hedgerows on site. All trees are to be retained, where possible.
- Public open spaces connected by a network of green links - (footpaths and cycleways).
- Buildings located to respond to the natural topography of the site to avoid encroachment on the skyline, set within a mosaic of infrastructure planting to minimise the visual impact of the built form and enhance the setting of the development.
- Creation of a landscape framework which integrates and links the landscape, ecological, drainage and topographical assets to provide a coherent infrastructure to the development.
- Significant infrastructure planting and management techniques to enhance the site and setting and provide visual screening of unsightly elements near the site i.e. the landfill tip, railway line and gantries and overhead power lines.
- Provision of accessible green open space linked to the wider setting, connected to nearby public open spaces and public rights of way to enable continued informal recreational enjoyment and ease of access to the open countryside beyond.

- Wildlife habitats protected and improved to enhance biodiversity of flora and fauna.
- Location of drainage features integrated into the green infrastructure and integral to existing ditches/wet areas further enhanced with species-rich margins to enhance biodiversity.
- Location of a Neighbourhood Equipped Area of Play (NEAP) and 5-A-Side pitch within the Public open Space accessible to both the residents of the development and the wider community.

Main Landscape Design Principles

- **Way finding** – creating clearly defined and legible gateways into and through the site.
- **Character and context** – responding to and reinforcing distinctive elements of the site and setting.
- **Ease of movement** – creating permeable and accessible spaces, linking and connecting them together making them inviting and easy to move through. Strong links have been established through the site with clearly defined and interlinked footpaths and public open space.
- **Legibility** – providing a setting for the development that is easy to understand with recognisable routes and landmarks to aid way-finding.
- **Positive streetscape interface** - between the houses, streets and public footpaths to ensure all adjacent open space is positively used.
- **Positive design of open space** - with clear definition, function and character.
- **Ecological enhancement** – to improve existing and proposed natural habitats.
- **Attention to detail** – this includes aesthetics, function, form, quality and craftsmanship with a defined palette of hard materials and plant species, to establish a visually attractive setting, articulate spaces and define character areas.
- **Planting design** – performs four key functions, that of shelter, visual enhancement, screening and bio-engineering. Visually the arrangement and form of planting is used to complement the landscape character. Large strips of native woodland vegetation give a mass effect to provide a framework. At a more intimate scale, avenues of street trees, bands of shrubs and hedge planting augment this background. A highlighting effect to create focal points can be achieved through the use of colour splashes, contrasting plant form and planting groups, placed at strategic points such as corners, crossing points, edge, entries and terminations of vistas.
- **Water** - enhances the landscape, adds a further dimension of interest and provides a valuable opportunity for creating different ecological habitats.
- **Maintenance/Management** – the long term landscape design/ecological intentions are realised with a landscape management plan to ensure the longevity of the landscape framework/open spaces/ecological habitats.



Landscape Design Strategy

- Wayfinding
- Character and Content
- Ease of Movement
- Legibility
- Positive streetscape
- Positive design of open space
- Ecological enhancement
- Attention to Detail
- Planting Design
- Water
- Maintenance/Management

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Landscape Design Proposals

Streetscape

Avenue tree planting with hedges and shrub planting to property frontages creates a consistent high quality streetscape within a leafy, green setting.

The development has been designed to create a series of character areas to engender a strong sense of community, which are all connected to a green link network of footpaths/cycleways.

Ponds/Water features

Two attenuation ponds are proposed which will provide storage capacity for surface water run off. The exact size, capacity and base ground modelling has been determined by the engineers, working in consultation with the consultant landscape architect and master planner to ensure they are of a ‘natural’ appearance. They have been designed to attenuate each land parcel, located at the low point of each area and designed to provide a positive focal point and integral feature of the residential development. They will have a variety of bank slopes to maximize the potential for ecology, but with a maximum slope of 1:4 with respect to health and safety. They will be planted with a range of wetland trees, marginal and aquatic plant habitats to provide enhanced visual amenity and enhanced bio-diversity.

A management strategy for the ponds will be carried out to enhance bio-diversity and maintain safe margins to the edges.

Green links

Green links provide legible pedestrian access and movement through the site forming a network of permeable and accessible spaces which are inviting and easy to move through.

They follow existing and proposed hedgerows, connecting up to the ponds and open space to provide clearly defined and recognisable routes. There are also opportunities to connect up to existing cycle routes and the proposed open space network of the Coppenhall East development to the north-west of the site off Groby Road.

Public Open Space

NEAP
A Neighbourhood Equipped Area of Play (NEAP) is an unsupervised play area, equipped for mainly older children (8+) but also accommodates younger children, within 1200m of home. A NEAP is proposed as a central feature to the public open space. This has been proposed in response to a recognised lack of play, particularly for teenagers, in the north-eastern area of Crewe. It responds to the sloping nature of the site and will cater for both younger children and teenagers, providing an active, vibrant and challenging area for play and exploration. In addition there is a 5-A-Side pitch provided and also large areas of open space and woodland glades for informal recreational enjoyment. It will be available to both residents of the development and the wider community.

Cheshire East Council’s Open Space Officer and Landscape Officer have been consulted in detail on this.

The area of the NEAP is 2,180m² in size and complies with Local Plan Policy RT.3.

The location of the NEAP has taken into consideration the need for good visibility and accessibility, the 30m threshold distance from residential properties and the constraints of the former landfill infrastructure which consists of surface monitoring wells, a vent and underground pipes.

The design of the NEAP makes good use of the sloping ground to create two terraced areas for play, which will require retaining in part using timber posts. The lower terrace offers the opportunity to provide for play equipment suitable for younger children with the upper terrace for older children and teenagers, which are connected by a grassed slope incorporating elements of ‘Natural Play’. It is based upon the ten principles for designing successful play spaces by Play England’s publication - “Design for Play”:

- bespoke
- well located
- use of some natural elements
- provide a wide range of play experiences
- be accessible to both disabled and non-disabled children
- meet community needs
- allow children of different ages to play together
- have built-in opportunities to experience risk and challenge
- be sustainable and maintainable
- allow for change and evolution

All pieces of equipment proposed are from the Wickstead range.

The area for younger play includes the following equipment:
Mystical World Modular Play System (incorporating 15 play features), 2 swings and a ‘Sputnik’ roundabout.

The area for older play includes the following equipment:
Electro Play System - Grunge (incorporating 6 play features), a pendulum swing and a basketball hoop.

The natural play elements to the grass slope include boulders, timber stepping stones and timber balancing logs, set within areas of native planting and trees together with an embankment slide. Natural Play is advocated as allowing children to explore their immediate world through being and playing together in a naturalised setting: a play landscape where plants and trees provide the background for physical and creative challenges and fun, where ownership and better community relations are part of the spirit of the place. The timber material used for the retaining walls, stepping logs and balancing poles will be specified to be from an environmentally and socially sustainable source, and certified by the Forestry Stewardship Council (FSC).

SPORTS PROVISION
In consultation with Cheshire East Council Open Space and Sports Provision Officer a 5-A-Side pitch will be provided adjacent to the NEAP. This will be drained and seeded with an all-round general purpose sports field mixture that provides quick establishment and forms a resilient surface for outfields and local authority play areas.

NATURE RESERVE
A 1.4 ha area of retained grassland within the landfill field will be enhanced to become a Nature Reserve, the aim being to provide a high-quality managed grassland habitat for wildlife and create the specific conditions required by the identified species receptors of the site.

ACCESS FOR MAINTENANCE
Gated access for maintenance of the Public Open Space and Nature Reserve is provided to the north-western boundary, adjacent to the proposed attenuation pond. This will also allow access for monitoring the landfill infrastructure wells, pipes and vents by the landfill operators.

Perimeter boundaries

A defined landscape buffer to the perimeter boundaries of the site is proposed to reinforce the existing thin hedgerows, create containment and visual enclosure, screen unsightly views of the landfill site and railway line beyond the site and provide connected ecological habitats. This will consist of substantial native woodland/tree/thicket planting and swathes of wild flower amenity grassland, where space allows.

Landform, ground modelling and drainage

The ground conditions within the former landfill area comprise restoration and capping materials to a depth of around 2m beneath which is an unproven thickness of waste material. To maintain the thickness of cover above the waste any re-profiling would need to comprise increasing ground level. Analysis of samples of the shallow soils indicates the soils to be of a clayey nature, although generally meeting the grading of topsoil but to be deficient in nutrients. Therefore within the proposed native thicket planting areas the upper 450mm of soil requires rotovating and improvement with the addition of lime, fertilizer, sand and silt sized particles to improve the soil texture. Where heavy standard trees are proposed the depth of topsoil improvement is proposed at a maximum depth of 600mm.



Figure 7.9 - Typical x-section of planting areas to the former landfill site



YOUNG PLAY EQUIPMENT



① WICKSTEED MYSTICAL WORLD MODULAR PLAY SYSTEM
- ENCHANTED MAZE (15 Play Features)



② WICKSTEED SWINGS
- TIMELESS CLASSICS (1 Bay 2 Seats)



③ WICKSTEED ROUNDABOUTS
- SPUTNIK

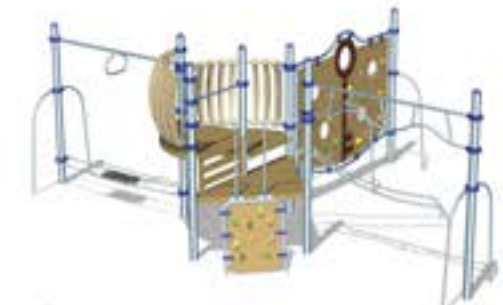
TEENAGE PLAY EQUIPMENT



④ WICKSTEED SLIDES
- TIMELESS CLASSICS (EMBANKMENT SLIDE)



⑤ WICKSTEED SWINGS
- PENDULUM SWING WITH BASKET SEAT



⑥ WICKSTEED ELECTRO PLAY SYSTEM
- GRUNGE (5 Play Features)

KEY

| | | | |
|--|-----------------------------------------|--|----------------------------------------------------------------|
| | Existing Trees | | Neighbourhood Equipped Area of Play (NEAP) (Size - 2180sqm) |
| | Existing Hedgerow | | Gated access to Play Area |
| | Proposed Native Infrastructure Planting | | Retaining Wall |
| | Proposed Trees | | Proposed Footpath |
| | Amenity Grass (Mown) | | Existing Levels |
| | Tall Grass Margins | | Proposed Levels |
| | Rank Grass (Nature Reserve) | | |

Figure 7.10 Public Open Space/Play area and Nature Reserve Proposals



Plan showing location of Cross Section and Elevations



Figure 7.11 Cross Section and Elevations of the Public Open Space/Play area and Nature Reserve

Planting Design Intentions and Indicative Species

Infrastructure planting to the former Landfill site

Native broadleaf woodland and shrub infrastructure planting is proposed to create visual containment and screen views of the operational landfill site adjacent, enhance the landscape character and link existing component features of the perimeter and internal trees and hedgerows. It will create visual and ecological linkage between adjacent and perimeter habitats and the open space amenity areas.

This will be of a native broadleaf composition typical of the area and the existing adjacent and internal treed hedgerows.

| |
|-------------------------------------|
| English oak (Quercus robur) - 20% |
| Ash (Fraxinus excelsior) - 10% |
| Field maple (Acer campestre) – 10% |
| Hawthorn (Crataegus monogyna) - 20% |
| Hazel (Corylus avellana) – 10% |
| Blackthorn (Prunus spinosa) – 10% |
| Guelder rose (Viburnum opulus) – 5% |
| Spindle – (Euonymus europaeus) – 5% |
| Elder (Sambucus nigra) – 5% |
| Crab apple (Malus domestica) – 5% |

It will involve the use of 2-3 year transplants, whips and groups of feathered stock planted in an asymmetric pattern at between 1-2m centres. Small glades will be created to encourage the establishment of a species-rich herbaceous ground layer. All species obtained will be of a local provenance.

Interplanting of Heavy Standard trees

Groups of Heavy Standard Trees will be interplanted in the native whip, transplant and feathered stock to provide instant height and greater maturity to the planting. All trees will be 14-16cm, with an overall height of 4.25-5.5m and a well-balanced head. They will be at least 3 times transplanted and root balled and supplied by a nominated nursery.

| |
|--------------------------------------------|
| <u>Indicative Tree species to include:</u> |
| English oak (Quercus robur) |
| Ash (Fraxinus excelsior) |
| Field maple (Acer campestre) |

Hedgerows

Species have been selected which are representational of the landscape character and consist of at least 5 species which classes the hedgerow as species-rich.

| |
|---------------------------------------|
| <u>Indicative hedgerow species:</u> |
| Hawthorn - (Crataegus monogyna) - 50% |
| Blackthorn - (Prunus spinosa) - 15% |
| Field maple - (Acer campestre) - 20% |
| Guelder rose (Viburnum opulus) - 5% |
| Hazel - (Corylus avellana) - 5% |
| Spindle - (Euonymus europaeus) - 5% |

Avenue Street Tree/Planting

Species have been selected to satisfy a range of design criteria, namely; providing seasonal interest with good autumn and/or spring colour and suitable for a street location with an erect and compact branching habit.

Avenues of same species will be used to create character areas within the development. All trees will be a minimum EHS 18-20cm (with a straight clear stem of 1.8-2.1m to the first branch, overall height of 4.25-6.5m and a well-balanced head). They will be at least 3 times transplanted and root-balled and will be supplied by a nominated nursery.

| |
|--------------------------------------------------|
| <u>Indicative street tree species:</u> |
| Small leafed lime – Tilia cordata ‘Streetwise’ |
| Columular cherry – Prunus ‘Sunset Boulevard’ |
| Common ash - Fraxinus excelsior ‘Westhof Glorie’ |
| Pin oak – Quercus palustris |
| Silver birch – Betula albosinensis ‘Fascination’ |
| Cherry - Prunus avium ‘Plena’ |

Waterside trees to the attenuation ponds

Trees to be a mixture of Extra Heavy Standard specimens (16-18cm), multi stem specimens (350-400cm) and pollarded trees to create a more naturalised effect.

| |
|-------------------------------------------|
| <u>Indicative waterside tree species:</u> |
| Common alder – Alnus glutinosa |
| Green alder - Alnus viridis |
| Scarlet willow Salix alba ‘Chermesina’ |
| Crack willow - Salix fragilis |

Grassland

Areas of amenity grassland will be designed to provide a site-specific response to the intensity of use and underlying ground and substrate conditions. Cutting frequency will be determined by specific design intentions to balance habitat diversity, use and safety, with the intention to enable effective maintenance by machine.

| |
|---------------------------------------------------------------------------------------------|
| <u>To the margins and edges to grassland areas a Wildflower Meadow mix:</u> |
| Traditional Hay Meadow BSH RE1: to encourage insects and birds at a sowing rate of 5gms/m2. |

| |
|---------------------------------------------------------------------------------------------------|
| <u>To the proposed wetland margins of the attenuation ponds a wet pasture mixture:</u> |
| BSH River Floodplain/Water Meadow RE3 to encourage insects and birds at a sowing rate of 5gms/m2. |

| |
|------------------------------------------------------------------------------------------------------------------|
| <u>Heavily trafficked areas grass slope to the play area and 5-A-Side pitch:</u> |
| BHS General Outfield A9 – a low maintenance mixture with slow re-growth after mowing, which is very hardwearing. |

Nature Reserve

The species/structural diversity of the Nature Reserve grassland sward will be enhanced by cutting annually and the arising removed, in order that the more vigorous grass species do not take over and to control the growth of scrub and other dominant plants. There is no seeding proposed to the area designated as the Nature Reserve, but a less intensive management regime.

Aquatic marginal

To achieve an attractive and ecologically diverse range of wetland habitats a range of aquatic, marginal and free floating submerged aquatics are proposed to the attenuation ponds and where it is assessed as appropriate, to the 2 existing ponds on site. Indicative species include the following:

| |
|---------------------------------------------------|
| <u>Marginals:</u> |
| Common reed – (Phragmites communis) |
| Bittersweet – (Solanum dulcamara) |
| Watermint – (Mentha aquatica) |
| Soft rush – (Juncus effusus) |
| Great willowherb – Epilobium hirsutum |
| Water plantain – (Alisma plantago aquatica) |
| Branched burreed – (Sparganium erectum) |
| Celery-leaved buttercup – (Ranunculus sceleratus) |

Floating sweet-grass – (Glyceria fluitans)

Bog-bean – (Menyanthes trifoliata)

Marsh cinquefoil – (Ranunculus peltatus)

To add colour and interest the following species will be included:

Water forget-me-not – (Myosotis scorpiodes)

Marsh speedwell – Veronica scutellata

Flowering rush – (Butomus umbellatus)

Yellow Iris – (Iris pseudacorus)

Purple loosestrife – (Lythrum salicaria)

Arrowhead - (Sagittaria sagittifolia)

Amphibious bistort – (Persicaria amphibian)

Brooklime – (Veronica beccabunga)

Free floating/submerged aquatics:

Yellow water-lily – (Nuphar lutea)

Rigid hornwort - (Ceratophyllum demersum)

Water-crowfoot - (Ranunculus fluitans)

Water starwort - (Callitriche stagnalis)

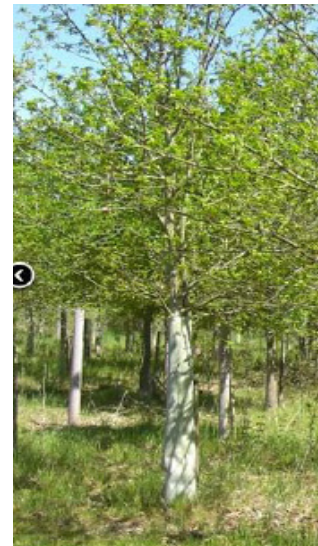
Broad-leaved pondweed – (Potamogeton natans)

Woodland Planting



Natural
eg. Oak, Ash, Hawthorn,
Field maple

Woodland Planting



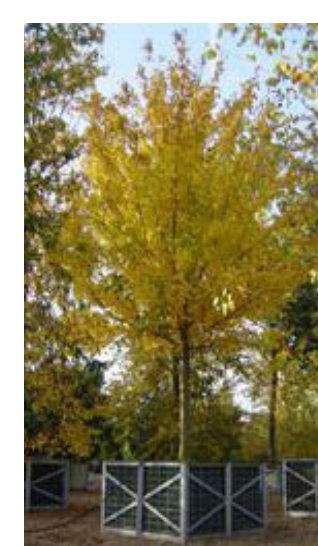
Natural
Oak, Ash, Hawthorn,
Field maple, Blackthorn

Hedgerow



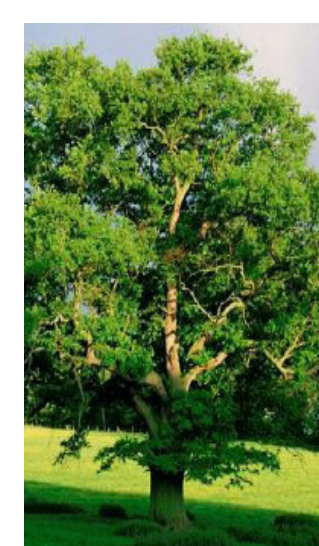
Natural
Oak, Ash, Hawthorn,
Blackthorn, Dog Rose

Native tree



Natural - medium
eg Acer campestre.
striking autumn colour.

Native tree



Natural - large 16-18cm
girth; eg Oak, fine native
tree

Waterside tree



Style: Natural
14 -16cm girth; eg.
Alder, Willow,

Ornamental and semi-ornamental shrub planting

Shrub and hedge planting will be used to establish a consistent and high quality streetscape frontage. Planting to be kept to 1m height to ensure natural surveillance. Species have been selected for their variety of seasonal interest, good establishment and succession to ensure a planting scheme which provides structure, definition, variety of leaf, stem and flower colour and ease of maintenance. Densities will be selected to achieve rapid establishment. All plants will be 3L pot sizes, comply with the latest horticultural British Standards specification and be first class representatives of their normal species. They will be supplied by a nominated supplier.

Indicative shrub/ground cover species:

Amelanchier canadensis, Buxus sempervirens, Choisya sp.,Cornus sp.,Cotoneaster sp.,Epimedium sp., Euonymus fortuneii, Escallonia sp., Geranium sp.,Hebe sp., Lavendula sp.,Lonicer nitida ‘Lemon Beauty’, Lonicera pileata ‘Maigreen’, Miscanthus sp., Osmanthus burkwoodii, Philadelphus sp., Prunus laurocerasus ‘Otto Luyken’ and ‘Zabelliana’, Rosa sp, Spirea sp, Stephanandra incisa ‘crispa’, Viburnum sp. and Vinca.

Street tree



Balanced - large
18-20cm girth; eg.
Fraxinus excelsior
‘Westhof Glorie’.
Superb, reliable
avenue tree.

Street tree



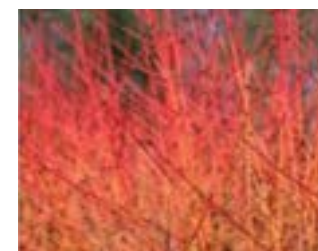
Columnar form - small.
18-20cm girth; Prunus
‘Sunset Boulevard’
Beautiful tree with
striking autumn colour
and spring flowers.

Feature Street tree



Balanced - medium
20-25cm girth, e.g..
Prunus avium ‘Plena’.
One of the loveliest of all
flowering trees.

Ornamental Shrubs and Hedging



Hard Landscape Design

Hard surface treatments

Hard surface treatments will follow a co-ordinated palette of materials with a principle of hierarchy based on the function and importance of the space. They will be visually appropriate, robust and easily maintained.

Adopted roads

Where roads are to be publicly adopted, design standards will be to local authority approval. Sustainable drainage will be to local authority approval. Sustainable drainage will be inherent to the design solution. Kerb stones and road drainage will be designed specifically to avoid adverse effects on amphibians.

Shared Surface

Small block unit paving will define the shared surface areas and feature village squares. There will be a distinct change in material from that used on the adopted road to one of high quality, small block units, which will create an attractive setting and reduce the importance to the vehicle. This has been demonstrated to be a reliable and effective means of reducing car speeds where priority is given over to pedestrians. This will be designed to local authority, publicly adopted design standards.

Footpaths

There will be an interconnected network of footpaths through the site. These will comprise standard footpaths alongside the access roads and informal footpaths within the public open spaces and to the green links. Where they are to be publicly adopted, the design standards will be to local authority approval.

Street Furniture/Seating

Street furniture will be co-ordinated, robust, durable and appropriate in character and quality to its specific location. Seating will be provided in the public open space with exact locations decided at the detailed design stage.

Such items will include seating, litter bins, lighting columns, lamps and bollards and will be selected at the detailed design stage. Any timber street furniture will be from an environmentally and socially sustainable source, and certified by the Forestry Stewardship Council (FSC).

Lighting

All lighting proposals are to be agreed with the local authority to publicly adopted design standards. The management of street lights will be fully considered within sensitive wildlife corridors, to maintain their value for nocturnal species, notably bats and barn owls.

The choice and colour of lighting columns will be co-ordinated to reflect the character of the area in which they are situated and complement the site furniture. Low level lighting will be provided along footpath routes - ‘green links’ that are not adjacent to roads and the design of these will be in keeping with the character of the areas though which the paths run.

Walls

Feature brick walls to define house frontages and garden boundaries in certain locations will be designed to provide a high quality interface to the streetscape and provide an attractive, co-ordinated and consistent street frontage. Exact detailing will be agreed at the detailed design stage, but of a style that reflects and complements the housing design detailing.

Fencing

Timber fencing to define the Wildlife Reserve will be from an environmentally and socially sustainable source, certified by the Forestry Stewardship Council.

Detailed Landscape Design Stage

At the detailed design stage the following drawing packages would be produced:

Landscape Earthworks - at 1:200 scale.

- To include ground modelling, existing and proposed levels, tree pit locations, and earthworks specification and landscape sections.

Tree/Hedgerow Protection Measures - at 1:200 scale.

- Prior to commencement of works, a detailed Tree and Hedgerow Protection Strategy will be prepared. This will be implemented in advance of construction work commencing, enforced and monitored through a Construction and Environmental Management Plan. All trees and hedgerows identified for retention will be identified on a Tree/Hedgerow Constraints Plan in accordance with BS 5837:2005, Trees in Relation to Construction, which shows below ground constraints represented by the Root Protection Area (RPA), the above ground constraints the trees pose by virtue of their size, position, location and specification of Tree Protective Fencing and Working Methods. Full and detailed Tree/Hedgerow Protection Measures, in accordance to BS5837:2005 will be implemented and adhered to throughout the construction period. The protective fencing strategy will be extended to include the protection of areas of advanced mitigation planting implemented in Year 1 of the construction programme, to safeguard the establishment of these areas.

Planting Plan - at 1:200 scale.

- Plan to be supported with a soft landscape specification, identifying location of all trees and hedgerows to be retained and detailed measures for their protection. i.e. reference to supportive Tree/Hedgerow Protection Plan, detailed planting proposals for all trees, native infrastructure woodland, native hedgerows, ornamental shrubs, grassland (wild flora and amenity) and wetland areas, including: species, numbers, plant sizes and where relevant, specific suppliers/nurseries and tree pit details.

Hard Landscape layout and specification - at 1:200 scale.

- Identifying detailed layout of all paving materials including sizes, colour and specification, kerbs, all street furniture elements, tree pit surrounds, signage and lighting columns.

Long-term Management/Maintenance plan -

- The long term design intentions will be realised with a site specific management/maintenance programme to ensure the longevity of the landscape framework/open spaces/ecological habitats.

Ecological Strategy

The ecological mitigation strategy focuses on the avoidance or reduction of impacts on the key ecological receptors of the site, and also provides enhancement options that could be used to provide net ecological gain, in accordance with best practice (IEEM 2006).

The strategy has two main elements:

- Retain and enhance hedgerows and the woodland pond area.
- Establish areas of less intensively managed grassland within the landfill field and provide habitats suitable for amphibians, reptiles, birds (including barn owls) and bats.

| Receptor | Designed-in mitigation | Other avoidance/reduction measures | Enhancements | |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Hedgerows | <ul style="list-style-type: none">• Retain and keep intact as many hedgerows as possible.• Compensation for any loss of hedgerows by planting greater lengths of new hedgerows. | <ul style="list-style-type: none">• Fence off retained hedgerows and establish as strict ‘no-go’ areas for construction plant and materials.• Avoid hedgerow disturbance or damage, either direct or indirect.• Maintain fence lines to continue to prevent damage or disturbance to hedgerows.• Ensure lighting regime does not excessively illuminate hedgerows to the detriment of nocturnal wildlife species. | <ul style="list-style-type: none">• Undertake supplementary planting within retained hedgerows to increase width, fill gaps and improve species diversity.• Prepare a management plan for that site that includes wildlife-friendly hedgerow management.• Ensure management plan is being implemented, including delivering optimal hedgerow management. |  |
| Amphibians (including great crested newt) and reptiles | <ul style="list-style-type: none">• Retain as much hedgerow, woodland and aquatic habitat as possible.• Create areas of undisturbed and less intensively managed grassland habitat within the landfill field.• Ensure ponds (and other water attenuation features) are configured for wildlife.• Link ponds to surrounding countryside. | <ul style="list-style-type: none">• If GCN are recorded within 250m, capture and translocate GCNs out of the construction zone into receptor site.• Employ destructive search techniques before key areas are cleared of vegetation and before soil layers are disturbed.• All this work will be undertaken between March and October when both amphibians and reptiles are not hibernating and only under the permission of a Natural England EPS licence. | <ul style="list-style-type: none">• Enhance existing ponds in the woodland area on site.• Provide two large hibernacula in the woodland and grassland areas on site.• Retain any felled wood, including dead wood, as log piles in the woodland and grassland areas on site.• Prepare a management plan for that site that includes amphibian/reptile-friendly management of hedgerows, woodland, ponds and grassland.• Ensure management plan is being implemented, including delivering optimal hedgerow, woodland, ponds and grassland management. |  |
| Birds (including barn owl) | <ul style="list-style-type: none">• Retain as much hedgerow, woodland and aquatic habitat as possible.• Retain mature oaks on the northern boundary of the site.• Create areas of undisturbed and less intensively managed grassland habitat within the former landfill field. | <ul style="list-style-type: none">• Removal of all potential nesting habitats for birds to take place outside of the bird breeding season (March to August inclusive).• Ensure lighting regime does not excessively illuminate habitats likely to be used by foraging/commuting barn owl. | <ul style="list-style-type: none">• Provision of two barn owl boxes on poles on the northern boundary of the landfill field.• Provision of seven bird boxes within the woodland area on site.• Prepare a management plan for that site that includes bird-friendly management of hedgerows, woodland and grassland.• Ensure management plan is being implemented, including delivering optimal hedgerow, woodland and grassland management. |  |
| Bats | <ul style="list-style-type: none">• Retain as much hedgerow, woodland and aquatic habitat as possible.• Create areas of undisturbed and less intensively managed grassland habitat within the landfill field. | <ul style="list-style-type: none">• Restrict construction activities to day-light hours only (or 6pm in winter).• Do not allow construction lighting to strongly illuminate hedgerows and tree lines after dark.• Ensure lighting regime does not excessively illuminate habitats likely to be used by foraging/commuting bats. | <ul style="list-style-type: none">• Provision of fifteen (five groups of three) bat boxes within the woodland area on site.• Prepare a management plan for that site that includes bat-friendly management of hedgerows, woodland and grassland.• Ensure management plan is being implemented, including delivering optimal hedgerow, woodland and grassland management. |  |



Summary

- This Design and Access Statement sets out proposals for the development of Maw Green in support of the outline planning application. It provides an illustrative master plan as well as technical and illustrative material.
- Together they form a framework for a high quality development which achieves the vision to 'create a vibrant new addition to the community that responds sensitively and positively to its character and setting to create a high quality design with a real sense of place'. A place which will have homes for people at all stages of life. A place which encourages a sense of community and pride and ownership along with generous amounts of high quality public open space. In addition the proposals will provide significant improvements for the wider community in terms of open space and play provision.



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