EAST CARR MASTERPLAN

Supplementary Planning Document 6

Hull City Council

All changes and revisions made in light of comments received to the first round of consultation have been incorporated in this draft. Changes made in light of comments made in the second round of consultations and other consequential changes are indicated in red text and underlined for the purposes of being identified if printed and/or scanned black and white copies.

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Contents

1 Introduction

1.1 Purpose of the SPD

This document outlines the process, considerations, qualities, and opportunities that will help to deliver a high-quality residential development at East Carr. This guidance is essentially aimed at parties with an interest in the site, be that potential development partners, Hull City Council and Hull residents. It promotes the processes that will lead to good design outcomes, and provides a clear understanding of the design approaches and requirements that are likely to be deemed acceptable in design and planning terms.

To be deemed acceptable, future proposals for the site must be consistent with the principles and design guidance contained in the SPD. It is recognised that it may not be possible for future proposals to follow every aspect of the SPD to the letter in particular where the guidance takes the form of concepts and/or indicative design guidance. In this sense it stands to be challenged where an alternative design approach is both fully justified, and is found to be acceptable to the Local Planning Authority.

1.2 Policy context

This Supplementary Planning Document (SPD) supplements policies in the Hull Local Plan 2016-32. The site comprises two housing allocations in the Local Plan, namely

- 861 Land to the North of Danby Close part 1 and
- 862 Land to the North of Danby Close part 2.

These two allocations taken together have a combined indicative housing target of 702 houses. In light of the site specific design consideration set out in this document, the indicative housing figure has been reduced to 689. Housing delivery in this area will contribute directly towards meeting the citywide housing delivery requirement of 620 houses per annum as established in Policy 3 of the Local Plan. It provides additional planning and design guidance specifically in relation to Policy 14 Design, and Policy 21 Designing for housing.

The SPD provides guidance that in some cases is directly or indirectly relevant to other Local Plan policies. This is because new residential development affects many areas of planning policy. Where this is the case the SPD helps to interpret relevant Local Plan policies in the context of the East Carr housing allocation, providing both indicative and specific design advice on both functional aspects (how it may work) and aesthetic properties (how it may look). Other policies of direct relevance to this document and for which the SPD provides additional clarification and guidance include but is not restricted to : 15 local distinctiveness; 26 location and layout of development; 39 sustainable drainage; 40 addressing flood risk in planning applications; 42 open space; and; 43 green infrastructure and the green network. Each of these policies are set out in full in Appendix A.

Hull City Council has developed a strong policy framework to enable it to appraise development proposals in design terms, and provide developers and their design teams with a clear understanding of how to go about developing a design approach which is likely to be deemed acceptable. This SPD and the spatial masterplan therein is part of that framework specific to East Carr and should be read in conjunction with other SPDs for example those on Flood Risk and Drainage, Open Space and Residential Design. Hull Residential Design Guide SPD published in 2020 is an essential companion guide to this SPD.

These can be viewed by visiting: http://www.hull.gov.uk/planning/planning-applications/supplementary-planning-documents.

1.3 Consultation and stakeholder engagement

Preparation of this SPD involved engagement with other relevant Council departments. The draft SPD has been through the Council's committee regime and elected members have had the opportunity to comment on the draft document.

The first draft SPD was made available for consultation for six weeks between the 10th August and the 21st September 2020. Prior to this the draft SPD for consultation was reported to East Area Committee in July 2020, to Planning Committee on the 3rd June 2020 and approved by Cabinet on the 27th July 2020. Given that the country was in the midst of the Covid 19 pandemic, consultation arrangements were amended from those set out in the Council's Statement of Community Involvement. The key difference was that instead of a public meeting, two full day 'appointment only' surgeries were held at a local venue on the 26th August and the 9th September 2020. Details of this consultation including methods of publicity and comments received are set out in the accompanying Consultation Statement.

Key issues highlighted during the first round of consultation included;

- Inadequacy of consultation (both on the SPD and the Local Plan);
- Level of development proposed not suitable for East Carr;
- Housing not suitable due to risk of flooding;
- Proposed access to site not suitable;
- Concern about impact on wider highway network;
- Concern about loss of open space / impact on wildlife;
- Inadequacy of local services to deal with increased population and;
- Impact on amenity and character of local area.

The SPD was amended in a number of places in response to comments received although no substantive changes were considered to be necessary. The two key changes related to a commitment by the Council to undertake a transport impact and flood risk assessment in advance of a planning application being determined.

Following the six week consultation a revised draft and accompanying Consultation Statement was put forward for a further four week public consultation having been reported to East Area Committee on 4 February 2021, to Planning Committee on 16 February 2021 and approved by Cabinet Committee on 22 February 2021.

The response to the second consultation led to a smaller number of representations and these largely focused on a number of concerns highlighted in the first of consultation. No substantive changes have been made to the SPD in light of representations received. A number of minor amendments have been made.

- New reference to strengthening existing planting around edge of site to protect residential amenity;
- Reference to potential to remove certain permitted development rights relating to ensuring effective drainage;
- Reference to the indicative housing figure has been brought to the front of the document;
- Clarification on the role of this document in determining any planning application and the relationship to other Local Plan policies and SPD's
- New appendix setting out (in full) relevant Local Plan policies (to assist in the understanding of the document / planning approach)
- Clarification of technical language as required (through links to other documents)

2

Masterplan principles

2.1 Masterplan principles

What is a masterplan, and what is it for?
The term masterplan can be misleading and can be interpreted differently by people depending on their own perspectives and interests in a site. This SPD seeks to agree a high-level urban design approach for the East Carr site focusing on issues such as: movement; layout; open space and main landscape features. This will be key in considering any future planning applications as will a range of other policies in the Hull Local Plan and other SPD's.

A masterplan can be broken down into smaller development parcels which are practical to develop one-by-one, perhaps by different developers as part of an overall consortium. This can be used to plan the phasing of any future development having regard to specific infrastructure needs across the whole area and to test that it will be deliverable.

The SPD and spatial masterplan is informed by the following four guiding principles:

1. Designing as an iterative process

2. Managing impact

3. Appreciating structure and scale

4. Designing in resilience

The focus of this masterplan is on establishing the basic urban structure of the new development – layout, patterns of movement within the site and connections beyond, the relationship to existing natural features and proposals for new open space.

More detailed architectural matters will be addressed as development proposals are brought forward having regard to the more detailed guidance set out in Hull Residential Design Guide.

2.2 Designing as an iterative process

Large-scale urban extensions such as the proposed East Carr development will be designed and influenced by a great variety, and number of stakeholders over a number of years. It is therefore paramount to get the basic structure and design parameters right from the outset, while allowing the scheme to adapt as it evolves through an iterative process.

Cities have developed organically over time and this can be seen through changes in local character, grain, form and architecture, neighbourhood-by-neighbourhood. This organic growth has produced variations of built form and character areas, akin to a mosaic of development across the geographical area of a city. Often resulting in variety and richness of townscape, but sometimes in jarring disconnects as developments from different eras lack cohesion.

Today's planning system, based on large-scale housing allocations and driven by numeric targets, does not lend itself to the organic development of the past, and risks new development taking place in a vacuum. To mitigate this risk and ensure the integration of new development, urban design practices such as spatial masterplans can be used to design new city fabric in such a way that responds to context so that over time new development becomes a part of a place, as opposed to an autonomous satellite development.

A spatial masterplan also has the advantage of providing certainty for landowners, investors and local communities about the nature of a development, whilst being flexible enough to allow plans to evolve as the detailed design of a development is worked through.

The East Carr Masterplan SPD seeks variety, not merely in terms of design detail, but also in terms of stakeholders capable of imparting their own creativity and distinctiveness within agreed parameters. The masterplan is an opportunity to sub-divide the allocation into development areas and potentially apportion them to different developers and design teams. This will enable a range of designers to participate and is desirable in terms of generating a much richer townscape through a variety in design.

Masterplans are often accompanied by design codes. In certain areas of the site, such as how the edge of the development is treated; and the design of public spaces, this SPD sets out design requirements akin to that commonly prescribed in a design code. In addition to this, *Hull Residential Design Guide* contains all the necessary detailed design guidance on residential developments in Hull.

2.3 Managing impact

A development on this scale and location will have a significant impact on the areas that surround and adjoin it. Some of these impacts may be perceived negatively, and it is important for the spatial masterplan to take every opportunity to integrate with its neighbours.

In this case demand for new housing has been met by allocating an area of land many people will identify with as being 'countryside' as the site is located beyond the current built edge of the existing settlement of Hull. Whilst this may be the case, it should not be forgotten that the land on which the Howdale Road estate was built was once also open countryside outside the built footprint of the city.

One of the keys to successful large-scale urban design is to create effective new connections between existing and new: both social and economic, and this to a large extent relies on creating effective physical connections. The residential area immediately to the south of the site around Howdale Road/ Dunvegan Road is typical of a post-1980 estates: car dependent, and characterised by cul-de-sacs and dead-ends. It is therefore more challenging to connect the East Carr development into the surrounding area as well as one would ideally like. There are perhaps only two obvious entrance points and this threatens to make the whole area into a large cul-de-sac, and poorly connected development resulting in congestion and bottlenecks.

To counter this threat the basic structure of the development must be predicated on providing efficient and attractive ways for people to move around without the need to drive, whilst recognising that people may still choose to drive. The position and shape of building blocks should promote this, and the location and design of facilities such as open space, public transport, retail and community buildings should take account of the essential need to promote a walkable suburban environment, with all facilities, and focal points within the site, located not more than a five minute walk from the vast majority of front doors. It is acknowledged that access too many other services and facilities will involve either public transport or use of a car and the proposed layout and design accommodates and supports such trips.

Another potential threat that exists on this site and indeed one that equally affects large parts of the city relates to flooding. The design and layout of the new development must ensure not only that people living in the new housing are not at risk from flooding but also that the risk of flooding is not transferred to the surrounding area. Whilst it is unlikely that new development will reduce the risks associated with groundwater flooding in the existing area it should certainly not make matters worse. The related flood alleviation scheme to the northwest of the site will however have positive benefits to existing housing.

Careful attention to layout and design including the use of both above and below ground sustainable urban drainage and provision of open space will make a positive difference within the site and will mitigate the risk of flooding as will compliance with property level design guidance.

In accordance with guidance in the National Planning Policy Framework and relevant other Local Plan policies, applicants will be required to mitigate and reduce to a minimum potential adverse impacts resulting from noise (including through the construction phase) from the new development and to consider carefully lighting strategies to protect local amenity.

2.4 Appreciating structure and scale

Urban structure refers to the pattern of development blocks, streets, buildings, open space and landscape, which layered together make up built areas. It is the relationship between all these elements that creates the overriding sense of a place.

A place that is planned, rather than one that has grown organically, can look rather contrived. Urban design strategies are needed to mitigate against this threat. New developments can respond positively in a variety of ways such as: varying densities across the scheme through variations in building type; and using local variations in architecture, roofscape, materials and types of detailing.

Whilst it is also important that architectural detailing helps to form the character of new development, this design detail is perhaps for a later stage in the iterative design process. What is more important at this stage of master planning the site is to consider in detail the basic urban structure of the new development.

Character of place can be made, or lost, when creating the basic structure of a place. For example, the tightness of street corners, curvature of streets, off-setting of junctions, how buildings enclose streets and spaces, and close views, how landscape is used, and how parking is integrated all have an effect on the character of the place long before detailed building design takes place.

Appreciating scale is about more than adopting a scale of development that fits with the site and its context. Scale is also a tool which designers are expected to use to create attractive places by making them more legible, by creating a strong sense of enclosure around public spaces, and introducing variations and landmarks.

2.5 Designing in resilience

Tackling Hull's climate challenges, such as responding to an increasingly high risk of flooding, and reducing car dependency, are critical themes of the East Carr Masterplan. The spatial masterplan promotes a multi-benefit approach to landscape that supports sustainable drainage requirements, whilst simultaneously providing opportunities for biodiversity, food growing space, and creative play for both children and adults.

Visit any well-established, desirable residential neighbourhood and in most cases natural features such as trees, grassed verges and gardens will be an important part of the character of the area. It is imperative both wildlife and people, that connective routes consisting of green and blue infrastructure[1] cross the entirety of the site. Natural landscaping is an integral part of the spatial masterplan and the sites existing natural features such as hedgerows and trees will be used to the schemes advantage, rather than seen as a constraint.

[1] Blue/green infrastructure relates to natural and semi-natural features designed to deal with flooding / drainage issues.

Site context and characteristics

3.1 Location

The site lies approximately 1.5km north of the centre of the medieval village of Sutton-on-Hull. The proposed site abuts Holderness drain (watercourse) along its northern boundary (which also forms the northern extent of the local authority boundary of Hull). Located between the site and Sutton-on-Hull village is the 1980s private housing estate north of Robson Way, built around, and accessed from Howdale Road. The estate extends to the east in the form of an area of public housing served from Dunvegan Road.

Despite the large number of residential properties in the area south of the site, this part of Hull experiences a dearth of ancillary facilities relative to the number of residential properties. Exceptions to this being Spring Cottage Primary School, a row of shops including a convenience store, hot food takeaway and hairdressers, and a petrol station on Robson Way. The Saltshouse Tavern public house is located on Robson Way at the junction with East Carr Road and Saltshouse Road.

The site is just under 30 hectares of which approximately 21.5 hectares is considered developable. Approximate 8.5 hectares of the allocated land falls into flood zone 3b which is functional flood plain (see 3.2).

Fig 1: Location maps

3.2 Opportunities and constraints

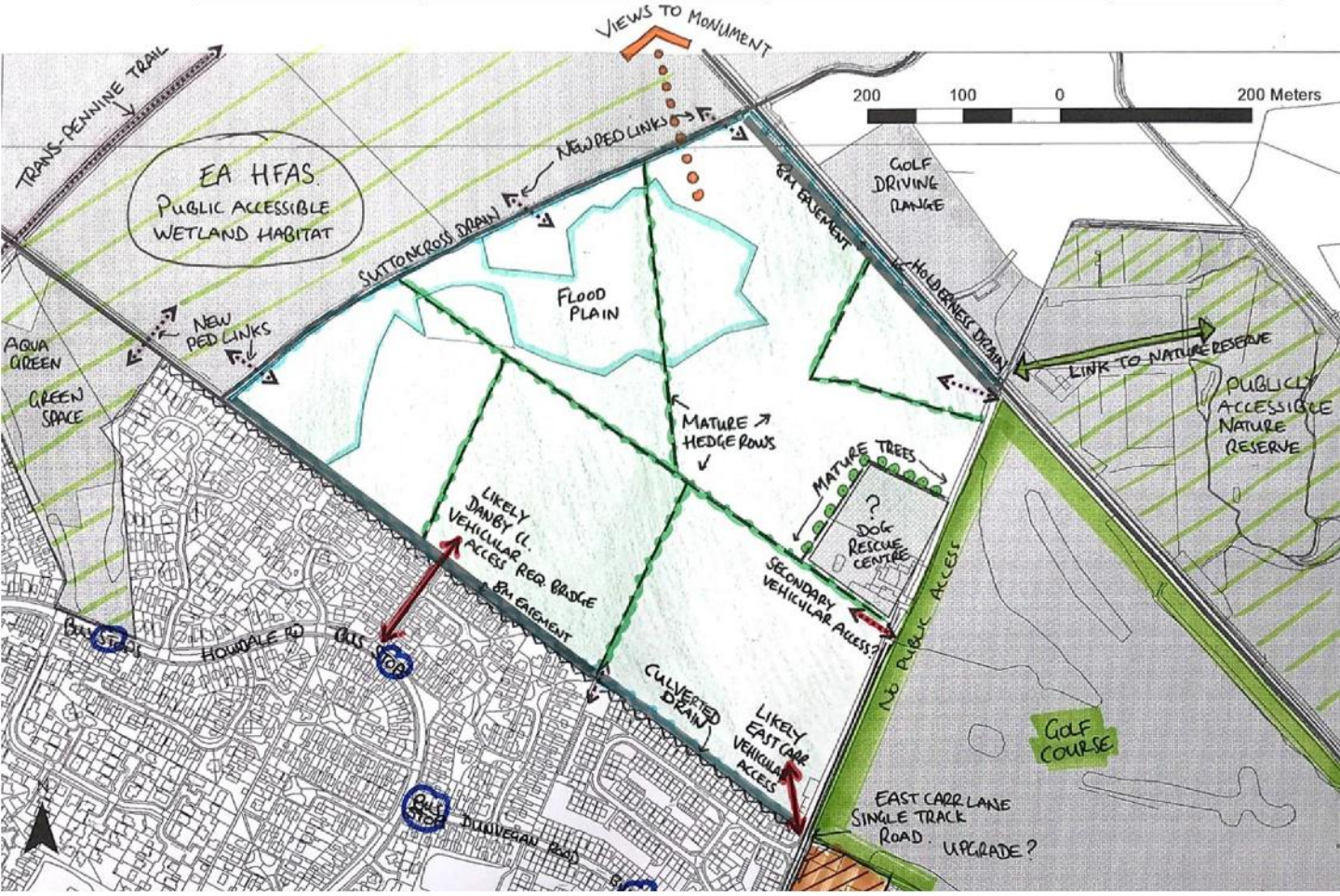


Fig 2: Opportunities and constraints map

Fig 3: Local services and amenities

Transport

The area immediately south of the allocation site is well served by the bus route serving Howdale Road and Dunvegan Road. This bus route will ideally extend to form a loop into the development from Howdale Road, entering and exiting the site via Danby Close. The area is however largely orientated to private cars and this is reflected in the dearth of local facilities and amenities. The Hull to Hornsea cycle route 66 (Trans Pennine Trail) is relatively easy to access from the area and provides a good cycle connection south to Witham on the eastern edge of Hull City Centre.

Heritage

Sutton Village conservation area lies approximately 1.5km to the south. The relatively low-rise nature of the development between Sutton-on-Hull and the allocation site creates an opportunity to exploit views from within the site to the tower of the Grade I listed St James Church. Similarly, there is an opportunity to exploit views north towards the tower of the Church of St Mary in the East Riding village of Swine.

Within the immediate vicinity of the site is the Scheduled Monument of Swine Castle Hill situated within open countryside close to the North East corner of the site (within the East Riding of Yorkshire). Castle Hill at Swine is the remains of a medieval motte which survives reasonably well. Limited excavations have confirmed that evidence of defensive and domestic structures survive on the mound.
https://historicengland.org.uk/listing/the-list/list-entry/1008042

As part of the process of preparing the Local Plan, the Humber Field Archaeology Unit advised that prior to any development occurring, further archaeological evaluation of the site should be undertaken to determine the extent and nature of any unknown archaeological remains. This will be a requirement as part of any future planning application.

Ecology

There is presently some ecological value associated with this site and whilst on balance a decision to allocate the land for housing has been taken, it is still important to protect where possible such value. Hedgerows and flood plain grazing marsh (marshy grassland) are significant natural features within the site. The Natural Environment and Rural Communities Act classifies these as Habitats of *Principal Importance*, which the Local Authority has a duty to protect. Redevelopment of the site is required to target 'no net loss of hedgerows', and a 10% gain in quantity or quality of habitats including for example the creation of new hedgerows and other appropriate green infrastructure. This SPD requires the protection of existing landscaping around the perimeter of site, particularly on western boundaries with exiting housing and opportunities should be taken to strengthen this planting where required to further protect the amenity of existing housing.

A Habitat Regulations Screening Assessment is required due to potential pollution/impacts on watercourses. The ecological value of drains and other watercourses is recognised and will be safeguarded ensuring also that they continue to play an important role in protecting against the risk of flooding. In addition, detailed ecological appraisal and assessment will be required including surveys of: Breeding, passage and wintering birds; Reptiles; Otters; Water Voles; and Bats (commuting). The ecological appraisal should assess the site in the context of the wider environment including locally designated wildlife sites. A requirement for off-site compensation may be necessary given the biodiversity value of the site but wherever possible existing features will be retained and/or new features will be designed to improve ecological value within the site. It is acknowledged that design refinements may be required in light of the outcome of detailed ecological appraisal and assessment including for example lighting arrangements for green infrastructure (providing a balance between public safety and the natural environment) or the provision of appropriate roosting boxes.

Climate change adaptation and mitigation

The widely recognised impacts of climate change need to be taken into account when designing residential developments. New homes should follow fabric first principles and be designed so they are capable of achieving thermal comfort without the need for mechanical space heating and cooling. This can be achieved through specifying good levels of insulation, air tight windows and doors, and avoiding thermal bridges. Trees should be planted throughout public spaces, including on streets, and around seating to provide shade. Wherever possible porous materials should be used to store excess surface water run-off and slopes should direct water into designated areas. Green infrastructure, such as the creation of SuDS, rain gardens, swales and reed beds should be multifunctional so that as well as achieving targets for drainage and flood risk, features may also provide benefits for people, such as through the use of rain gardens for grey water, and for wildlife by creating new high-quality habitat. These areas should be clearly defined for their intended purpose to ensure some undisturbed areas remain present to mitigate for species on site. It is encouraged to use new innovative technology to adapt to the possibility of frequent flooding and higher temperatures.

EU directive on Electric Vehicle (EV) parking is relevant to this development. All homes should include a single operational EV point, and the ducting only needed to install a second charging point in the future. Operational EV points should be OLEV approved and installed by an OLEV approved installer. The Distribution Board in homes needs to be EV compliant so that the two EV points can be used at the same time without presenting a fire risk in the home.

Local Plan Policy 17 - *Energy Efficient design* applies and the site has ample opportunity for Solar PV for electricity and heating water. Where renewable energy generating technology is provided this should be considered along with in home battery storage which is very likely to become common place in UK homes in the future. Battery storage requires adequate space within the home (similar to a modern boiler) close to distribution boards.

Housing developers should consider whether the development will rely on mains gas, and therefore subjecting future residents to uncertainty over future supply and pricing. Alternatively Air Source Heat Pumps may provide a viable option. Layout and design of streets and houses will consider thermal efficiency, and risk of overheating. *Hull Residential Design* provides relevant guidance on this issue including consideration of green roof systems, roof gardens, living walls and new tree planting which have numerous benefits including reducing heating/air conditioning costs of buildings, aiding carbon sequestration targets and delivering positive health and wellbeing impacts.

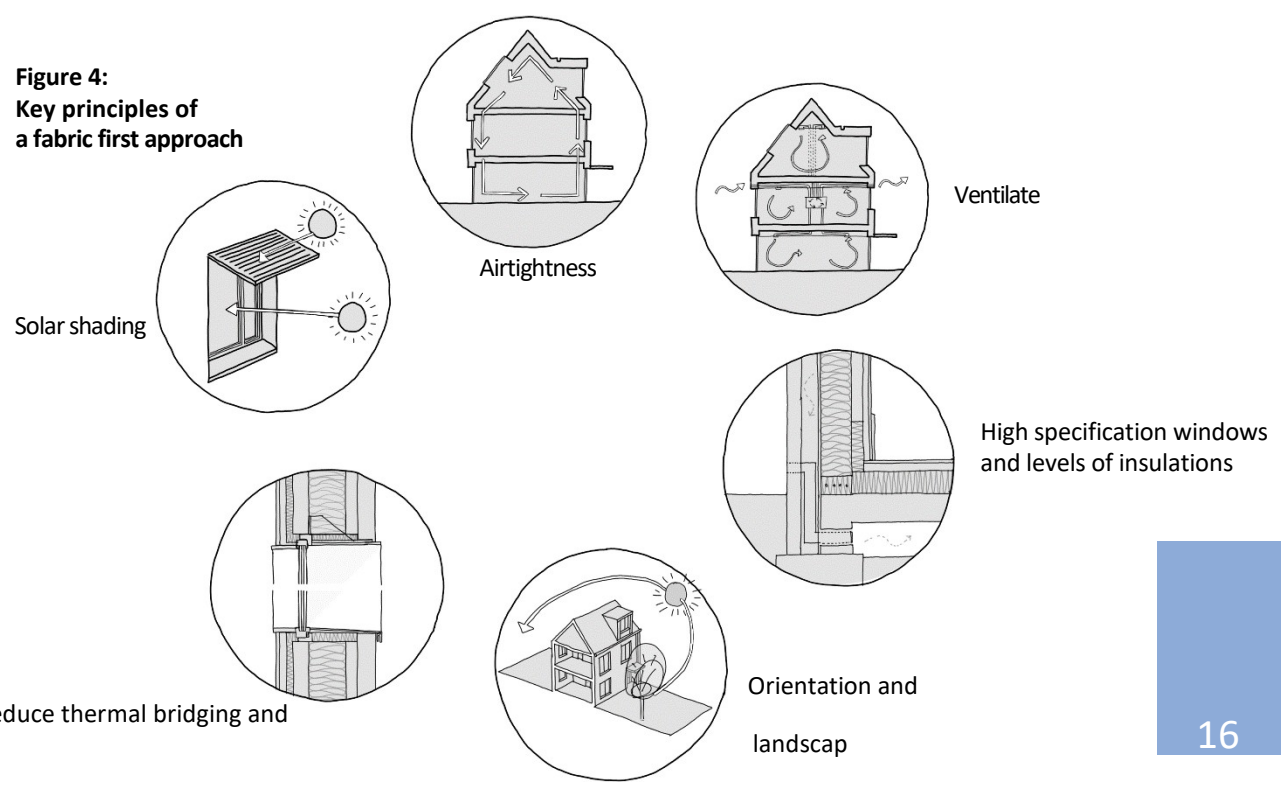


Figure 4:
Key principles of a fabric first approach

Flood risk and drainage

Guidance on flood risk is provided in the Council's detailed level 2 Strategic Flood Risk Assessment which has modelled the flood risk to the city in greater detail than the national mapping. http://www.hull.gov.uk/environment/adverse-weather/strategic-flood-risk-assessment.

It is recommended to divide the site/catchment into two cells: Yorkshire Water main drain systems; and the Environment Agency watercourse system.

For the purposes of modelling a run off rate of 3.5 litres per/sec applies to the site (greenfield) this figure will be subject to discussion with the Lead Local Flood Authority, Environment Agency and any developer of the site. Overland flows and breach outcomes must be picked up in modelling for the Flood Risk Assessment that accompanies any future planning applications, as will details of the Flood Zone B area.

There is a need for a consistent approach to flood management and the phasing of construction and drainage implementation throughout the site if multiple developers are involved.

A holistic approach to Sustainable Urban Drainage Systems (SuDS), both above and below ground, is expected with SUDS incorporated into the design of homes, streets and open space. SuDS are to be designed in line with the new *Codes for Adoption* so that Yorkshire Water can take on the role of maintaining the system. As such designs should take account of volumes for the 1 in 100 +30 for Climate Change rainfall events and include 10% for urban creep.[2]

SuDS should be integrated across the whole development wherever possible i.e. within streets, pocket parks, tree pits, and boundary treatments. This holistic approach to SuDS will help take a proportion of the required storage volume. Green infrastructure, such as the creation of SuDS, rain gardens, swales and reed beds should be multifunctional so that as well as achieving targets for drainage and flood risk, features may also provide benefits for people, such as through the use of rain gardens for grey water, and for wildlife by creating new high-quality habitat.

There is an opportunity to open the culverted drain in the southwest corner of the site. An 8m maintenance easement along all water courses is required by the Environment Agency, there is an opportunity to design this easement in such a way that provides a perimeter path/green corridor around the site encouraging pedestrian and cycle movements, and linked to surrounding open space and the Trans Pennine Way cycle route. Please note: The Environmental Permitting (England and Wales) Regulations 2016 require a permit to be obtained for any activities which will take place on or within 8 metres of a main river (16 metres if tidal).

In terms of building design all facility buildings to utilise store and reuse methods whilst it is expected that as a minimum all houses will be installed with water butts, the volume of which is to be agreed with Hull City Council's *Flood Risk Management Team*.

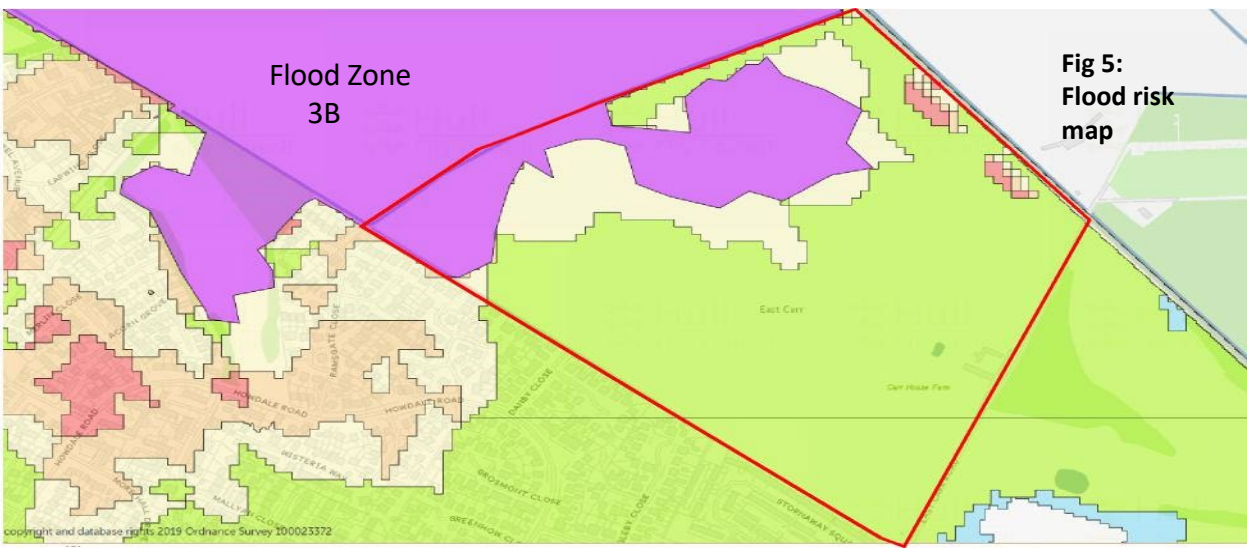


Fig 5: Flood risk map

[2] Refer to SPD4 Living with Water – Approach to surface water drainage.

Movement and connections

4.1 Existing network

East Carr has at present two possible access points for vehicles. Danby Close and East Carr Road. Danby Close is a two-lane cul-de-sac that terminates before Sutton Cross Drain. Danby Close appears to have been designed with the intention of extending the settlement into the proposed site. There is existing pressure on this potential access from existing residents using the carriageway to park cars, limiting the access road to single lane at times. The opposite end of Danby Close is a T junction onto Howdale Road, a primary route through the existing settlement that carries the local bus route.

The other potential vehicular route into the site is from East Carr Road. This is a single lane leading up the eastern edge of the site. As the road crosses the threshold of the existing settlement it downgrades to a track with occasional laybys to allow cars to pass. Vehicle access to the site via East Carr Road is constrained by the narrow carriageway, parked cars in the highway, and several pinch points on East Carr Road between the site and junction with Dunvegan Road.

There is another existing access into the site from East Carr Road to a dog rescue centre, this entrance may also provide a vehicle access into the site from East Carr Road. Further north after crossing Holderness Drain, East Carr Road terminates at the driving range and nature reserve.

The site interior is currently used informally by pedestrians, often dog walkers, along the circular route formed by the boundaries of the site. Holderness drain links the two northernmost corners of the site. One field boundary further west of the site runs the Trans-Pennine cycle route that connects Hull City Centre with the Holderness Coastal town of Hornsea.

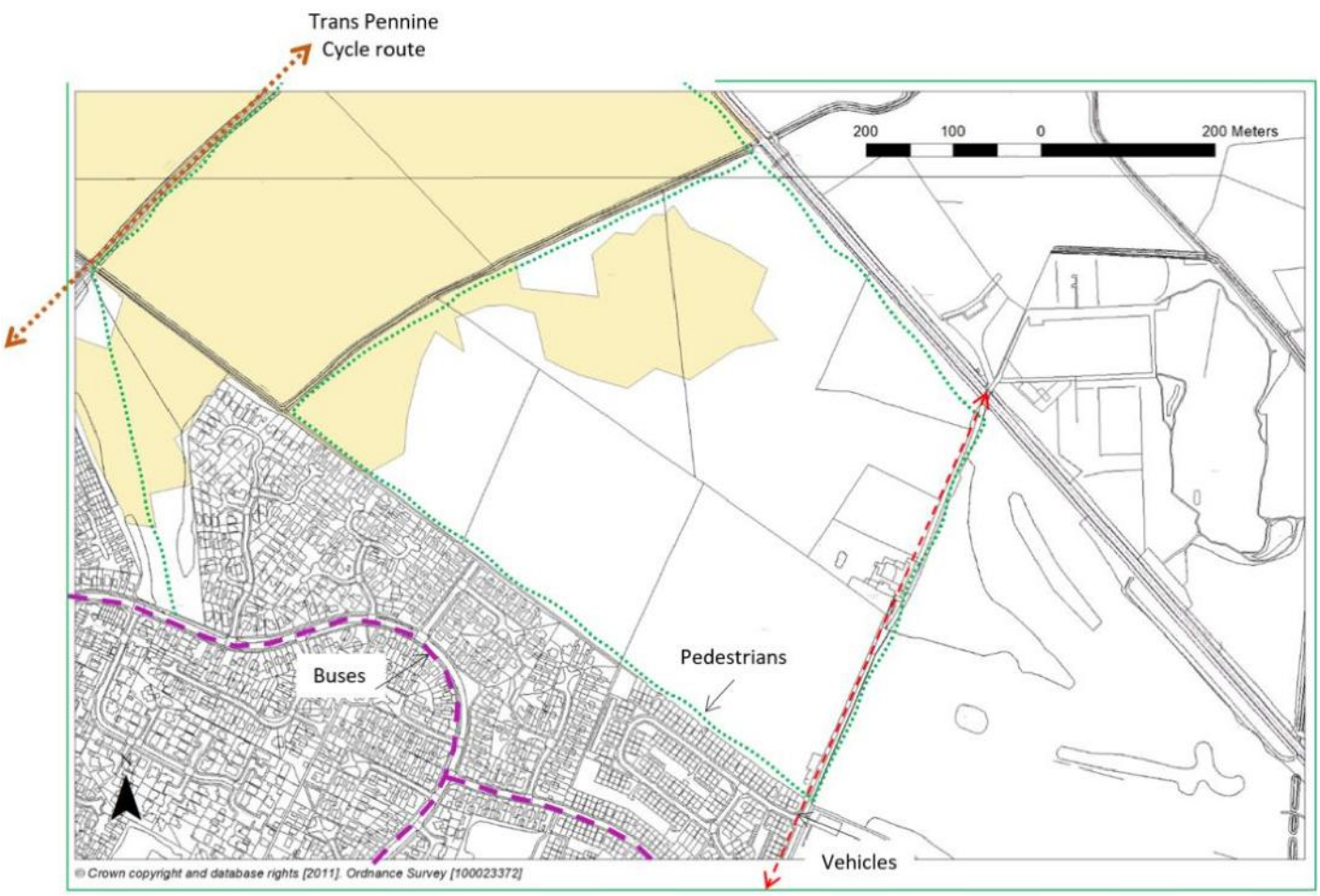


Fig 6: Existing movement framework

4.2 Proposed movement framework

Future development of the site will require at least two viable vehicular access points. Danby Close will likely form the main vehicular entrance to the site and at present is the only entrance to the site capable of carrying large vehicles such as buses and bin lorries. Any access into the site from Danby Close will have to span Sutton Cross Drain at the threshold to the site. East Carr Road could be a second vehicular entrance to the site, it is envisaged this will primarily service the southeast of the development and could also expand upon the existing access point where the dog rescue centre is currently located.

Without upgrades to East Carr Road it will not be able to withstand large quantities of traffic. The junction south of the site where East Carr Road meets Dunvegan Road has limited capacity. It is intended that there will be no through route (other than for emergency and other essential service vehicles) from one access point to the other. This is intended to avoid issues of rat-running, to create a more pleasant environment and in recognition of the limitations of East Carr Road outlined above.

The SPD identifies a significant number of additional vehicle movements will emanate from the allocated housing site through two access routes along East Carr Road/DunveganRoad and Danby Close. Both of these routes intersect with Robson Way/Salthouse Road. These movements will place an additional burden on the wider local highway network in peak hours and therefore the Council has committed to undertaking a transport impact assessment of the wider area (including the two proposed access points). This may identify a need to improve the capacity of the surrounding highway network at critical junctions (e.g. Leads Road roundabout with Wawne Road) to take account of this increase. The outcome of this assessment will provide a context for any subsequent planning application albeit a further more detailed assessment may still be required to accompany an application. Any identified improvements would need to be funded at least partially by the developer of this housing scheme. The Council will consider the merits of alternative access proposals as part of any planning application, should the transport assessment suggest that this is necessary.

The limited capacity of the road links threatens to turn the site into a large cul-de-sac. It is therefore an imperative that the eventual site layout takes as much pressure off the vehicular entrances as possible. The development shall be designed in such a way that alternative modes of transport, especially walking and cycling, are seen as attractive options when travelling within and out of the site.

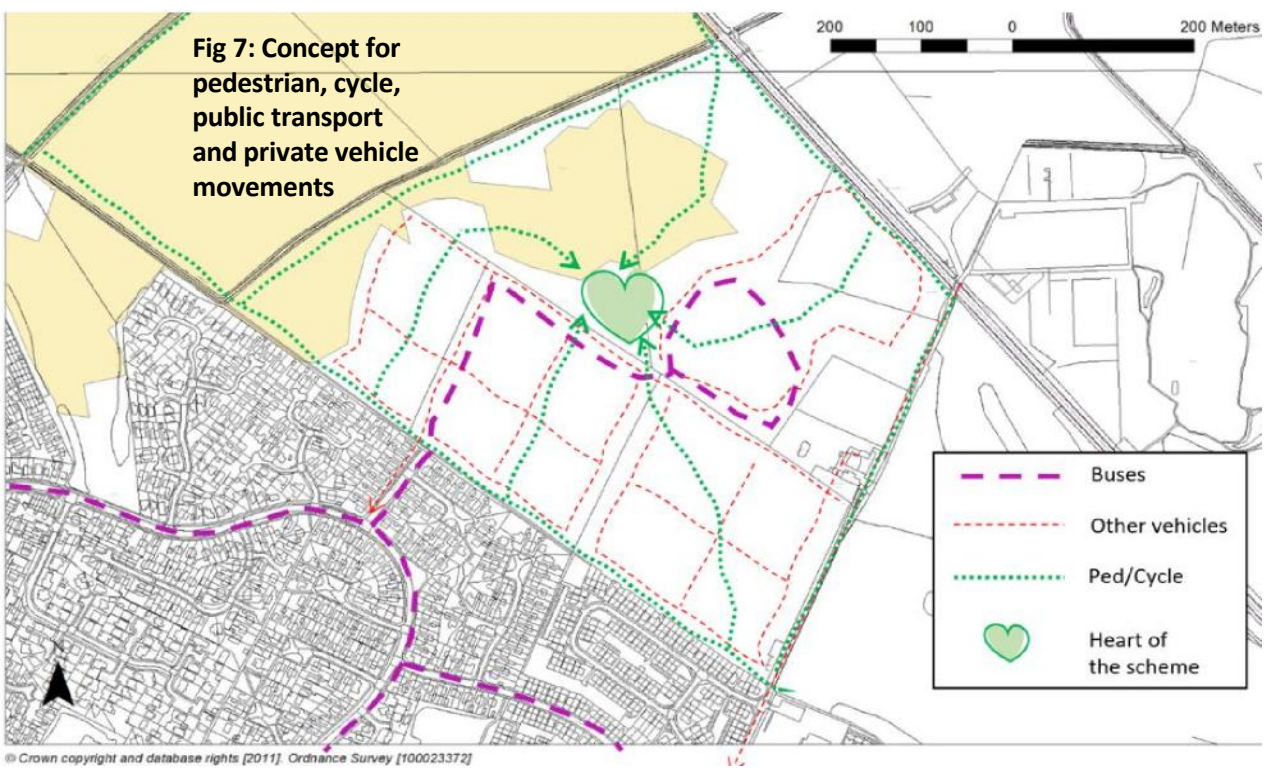


Fig 7: Concept for pedestrian, cycle, public transport and private vehicle movements

Form of development

5.1 Legibility

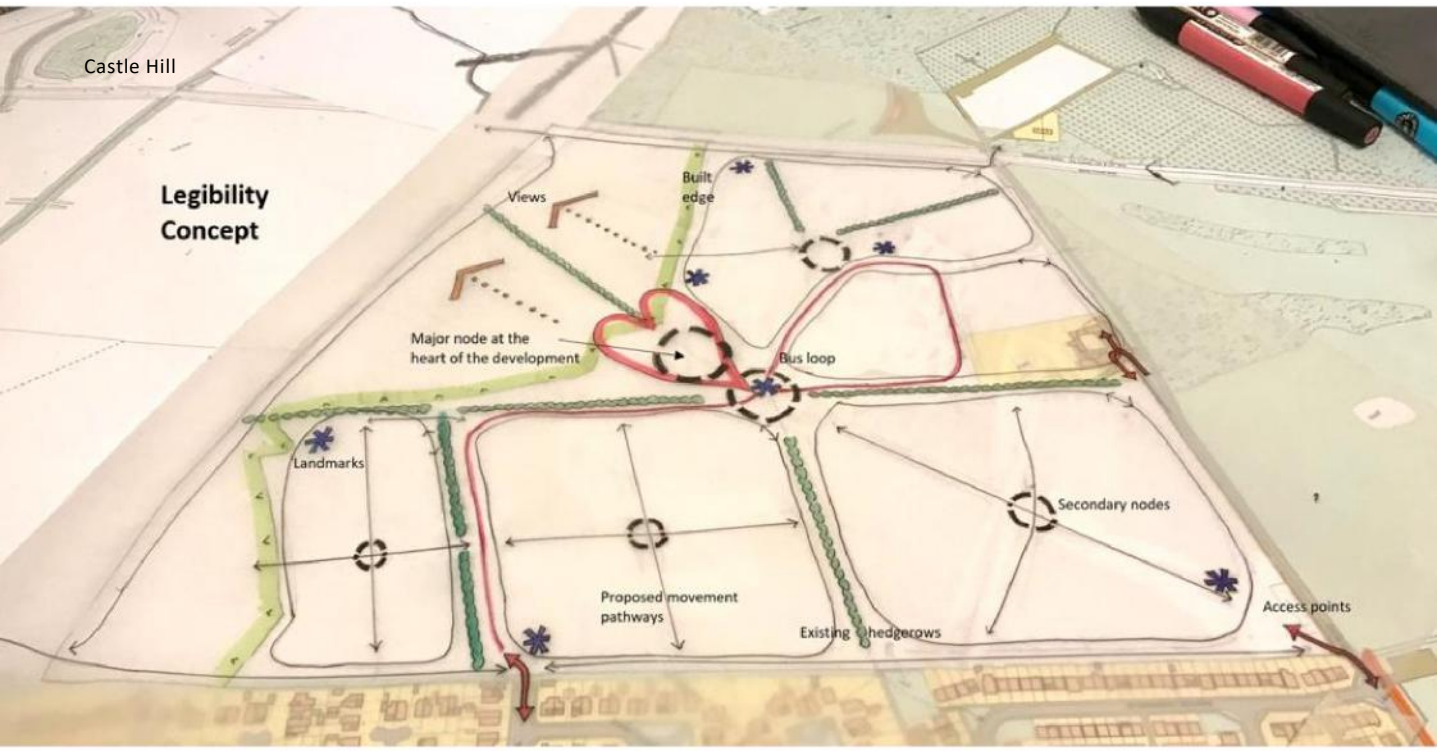


Fig 8: Legibility: Landscaping and public realm proposals overlay the proposed built form to create a distinctive and legible place.

Future redevelopment of the site shall introduce new legible features such as landmark buildings and focal places (such as pocket parks and play spaces) for neighbours to meet and converse, and for people young and older to exercise and play.

Unique and one-off landmarks in the form of distinctive buildings and spaces are required to give the development legibility by acting as wayfinders that provide reference points within the townscape. These help to orientate people and provide focal points of activity and neighbourhood life.

Distinctive buildings and spaces may find their distinction in a variety of ways such as their scale, architecture, roofscape, materials, use or function, or indeed a combination of these attributes. Legibility and distinctiveness must be genuine, it will not be deemed acceptable for a certain feature, such as a house type that is considered by a developer to be 'distinctive', to be repeated several times across the development. This defeats the purpose of a distinctive feature and the idea loses its effectiveness.

Making the most of views both within the layout, and to features outside the development will also aid the legibility of the development and help foster a sense of place. The masterplan should facilitate views towards Castle Hill monument, and exploit long distance views south towards the tower of the Grade I listed St James Church. This is by no means an exhaustive list and other features, both built and natural, will also provide visual interest from both near and afar.

Within the interior of the site greater impact is achieved through what is known as *serial vision*, where the scenery of a place reveals itself in a series of staggered jerks and revelations.

An important design principle will be to create a series of linked spaces and focal points to act as meeting places, make it easy to get around, and increase legibility.

Fig 9: Memorable moment in the townscape created by locating a distinctive house overlooking an off-set junction

5.2 Form, scale and density

Scale and density will be informed by several factors including an understanding of the surrounding context and what is appropriate for the site. A site density between 30-40 dwellings per hectare (dph) is considered appropriate. This is not a ridged target because rather than meeting arbitrary figures, the ambition is to create a well-connected, compact and walkable neighbourhood.

The general suburban form of the existing development to the south should be respected, however, the new development must not imitate the dispersed car-dependent, and cul-de-sac form of the Howdale Road area.

As a large development there is an opportunity to vary both scale and density in different areas of the site to create local landmarks and different character areas within the masterplan.

'Cul-de-sac' housing works best on a small scale and where they provide pedestrian and vehicle access to the rear of plots from internal courtyards. These courtyard spaces can be activated by inner perimeter houses in small numbers between 3-9 depending on the size of the block.

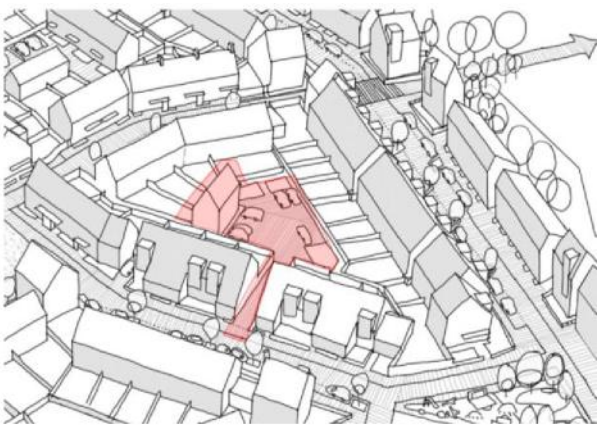


Fig 10: An acceptable form of 'cul de sac' with inner perimeter houses and parking

Another key element of this guidance is the requirement to reduce the dominance of car parking on front gardens and streets, allowing more space for planting and soft absorbent landscape to improve amenity and mitigate against flooding.

To achieve this, all new houses will be designed with one on-plot parking space preferably to the side of the house, and in a small number of cases to the front. Additional on-plot parking will be provided to the rear of housing to allow frontages to be freed-up for pedestrians, socialising, active lifestyles, and soft absorbent landscape.

Rear on-plot parking will be provided in the form of private garages (or in some cases car ports) designed to be of ample dimensions that encourage them to be used as intended for parking cars. Given the particular drainage concerns in this area, consideration will be given to removing permitted development rights relating to the conversion of garages to habitable rooms. Experience shows that such changes can lead to increasing pressure for on-street parking and loss of garden space – reducing the capacity for natural drainage and impacting adversely on the character of the area. Related to this (in terms of drainage) consideration will also be given to removing permitted development rights preventing or reducing the extent to which front gardens can be 'hard surfaced'. In a small number of cases additional parking will be in the form of dedicated parking spaces within internal courtyards. Houses that align 'SuD streets' (see 6.4) will have no vehicular access to the front and therefore sufficient and appropriate parking provision must be provided to the rear.

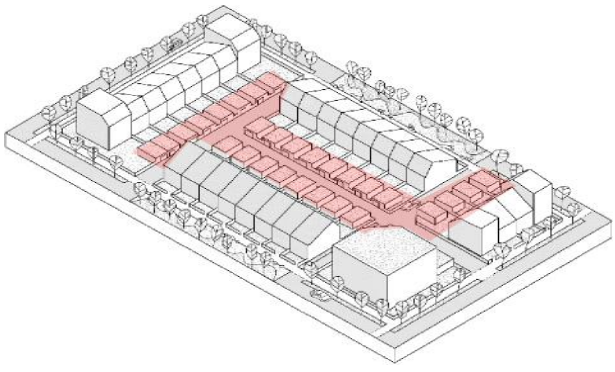


Fig 11: example of on-plot parking accessed from the rear of plots

6 Public realm and street design

6.1 Positive and safe public space

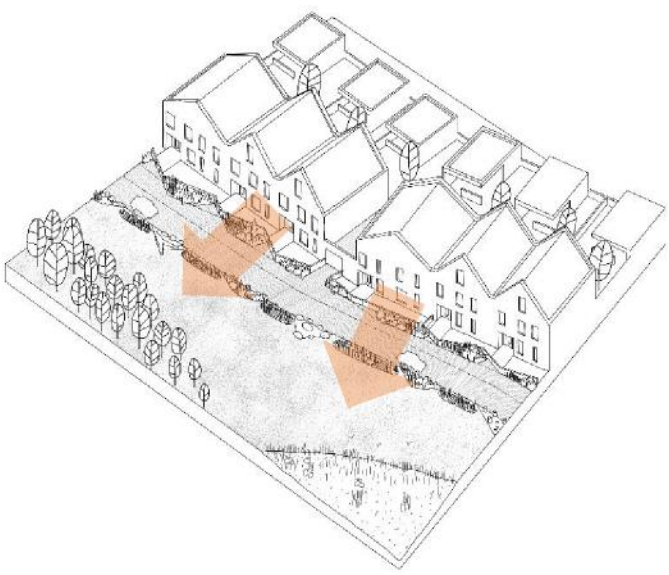
Given the abundance of evidence that describes the many positive impacts of truly public green space on people's quality of life, standard of living and health and wellbeing; green space has played an integral part in the conceptual masterplan.

East Carr is an island on a sea of green space, and it will be essential to continue this characteristic into the development through the provision of green footpaths and cycle routes across the site which will encourage community cohesion and carbon offsetting targets to support Hulls 2030 Carbon Neutral Strategy. The sea of green will be let into the development through a SuDS network that connects residents to central nodes and the surrounding amenity space. It is of paramount importance that an accessible pedestrian route is also maintained around the perimeter of the site. The SuDS network will support cyclists and pedestrians (and other forms of wheeled activity) and will hold right of way over cars.

Public spaces will be looked over by the frontages of surrounding houses. The loose grid layout of the masterplan also supports a series of pocket parks within the suburban blocks. Public open space should also offer opportunities to aid community cohesion in residential areas by creating allotments or community orchards.

Public space, larger and small, is to be overlooked by surrounding houses to encourage natural surveillance (fig 11). Private gardens should not back directly onto open spaces wherever possible to avoid fly tipping of garden waste and to preserve the quality of these areas. Where provided, seating should look onto any activity space and lighting should clearly define the edges and pathways of public space, the lighting should continue to bus stops and up to any shops and/or other commercial or community buildings.

Fig 12: Houses fronting onto open parkland provide good levels of natural surveillance and creates a strong built edge to the development



Careful consideration of planting can achieve a sense of enclosure in place of buildings where necessary. To avoid users feeling exposed and vulnerable in an expanse of space, large open spaces benefit from being sub-dived into smaller more manageable sections. This can be done by having areas of play, sports, bedding, lawn and/or water features as examples. This is especially important to provide equitable access to groups in society who may feel more vulnerable.

There is a large area within the site that is designated as flood zone 3b and as such is considered undevelopable. This area is expected to form a large area of open parkland designed to provide areas of activity and tranquility and be permeable to pedestrians and cyclists.

6.2 Play spaces and pocket parks

Play spaces and pocket parks work best when they are at the convergence of two or more pedestrian desire lines, they are more likely to feel safe and subsequently be used.

Play spaces are often a requirement of the planning system but do not always integrate with the rest of the development, they are often put in 'left over' spaces as an afterthought. Within the East Carr development, play and recreation must form an integral part of the site layout. The masterplan has identified a 'green heart' to the development and this offers a logical location for both play and recreational facilities. Given the large number of homes to be built, as well as the existing population, the 'green heart' is seen as a viable location for a community hub building providing facilities such as a café, crèche, changing rooms and public WCs.

A variety of types of play spaces should be considered; including natural playscapes, micro allotments, wildlife homes and feeders, and features that allow children to develop cognitive skills. Sport equipment like goal posts are low maintenance and do not restrict spaces to a single use. Whereas equipment such as climbing walls, skate equipment and playgrounds can be designed to segment large areas of public spaces into manageable sections to create the all-important sense of safety as well as legibility.

Pocket parks should be located where pedestrian routes intersect. Because Pocket

Fig 13 (right): Conceptual drawing of a multi-purpose park

Fig 14 (above): Multi-purpose pocket parks, overlooked and enclosed by houses and part of SUDS network. Clear passages through the space with options to sit, relax, play and observe

Parks are small areas they cannot support multiple uses like larger parks can, but they should have a clear function and be located on the route to busy areas. Many successful pocket parks have a combination of trees, seating and a focal point such as a sculpture, water feature, raised planters or allotments, providing an oasis from the built form. Pocket parks should be overlooked and contain effective lighting. Because of their relative smaller size they also require a strong sense of enclosure and should not be an 'island' surrounded by roads.

6.3 Street design

Streets will be the most common and arguably most important public spaces within the development. Their design is a critical element in the creation of an identity and sense of place. Streets serve many different roles: as the setting to homes, places for residents to meet their neighbours, playing-out, jogging, walking, cycling, as well as parking and the circulation of traffic. This SPD is unequivocal in asserting its requirement for street design to be inclusive and designed to take account of the full range of users.

The masterplan proposes the creation of a network of streets designed against the following hierarchy of street types taking account of location, role and function.

Primary streets

Primary streets are defined by their wider carriageways to allow for buses to serve the development around a loop. A width of approximately 24m (building to building, or building to edge) will in most cases be enough to incorporate footpaths and cycle ways on both sides of the carriageway. Footpaths will need to be wide enough to allow for 2m utility strips down both sides of the carriageway in a dual main arrangement.

SuDS zones will be incorporated between the footpaths and carriageway, and will include features such as street trees in cell systems and rain gardens. Private frontages to the buildings must be a minimum of 2m but this can be extended as appropriate.

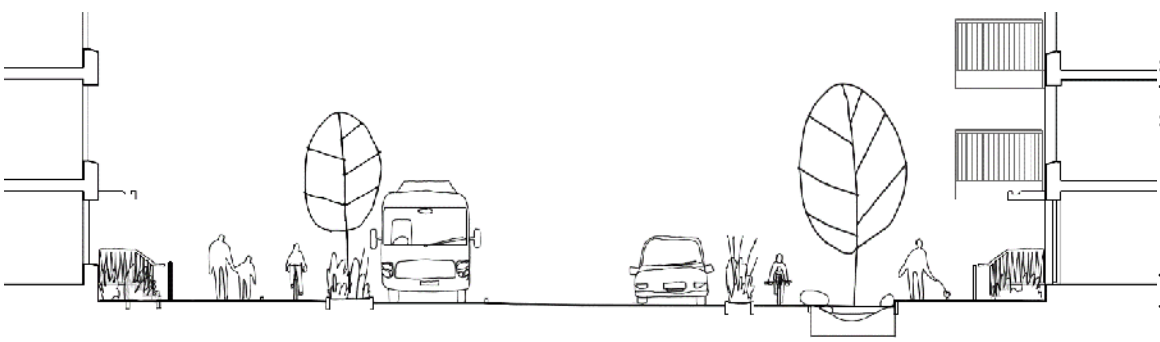


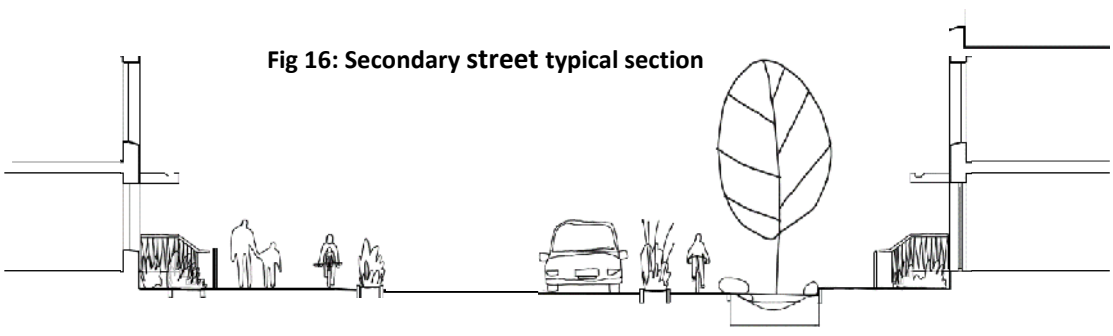
Fig 15: Primary street typical section

Secondary streets

Secondary streets will be the main vehicular routes around the development but should feel pedestrian focused. Secondary streets will be similar to the primary streets with the exception of having a narrower carriageway as these streets will not carry buses. A width within the range of 18-22m (building to building, or building to edge) will in most cases be enough to incorporate footpaths and cycle ways on both sides of the carriageway. Footpaths will need to be wide enough to allow for 2m utility strips down both sides of the carriageway in a dual main arrangement.

SuDS zones will be incorporated between the footpaths and carriageway, and will include features such as street trees in cell systems and rain gardens. Private frontages to the buildings must be a minimum of 2m but this can be extended as appropriate.

Fig 16: Secondary street typical section



Edge of development streets

Due to the nature of the site, some streets will be ‘one sided’. For instance, where houses front onto the open space in the west of the site, and where houses front onto an existing hedgerow.

A width within the range of 14-18m (building to edge) will in most cases be enough to incorporate footpaths on both sides of the carriageway and a designated cycleway. Footpaths will need to be wide enough to allow for a 2m utility strip down the side of the carriageway adjacent to the houses.

A SuD zone will be incorporated between the carriageway and footpath adjacent to the houses, and will include features such as street trees in cell systems and rain gardens. Private frontages to the buildings must be a minimum of 2m but this can be extended as appropriate.

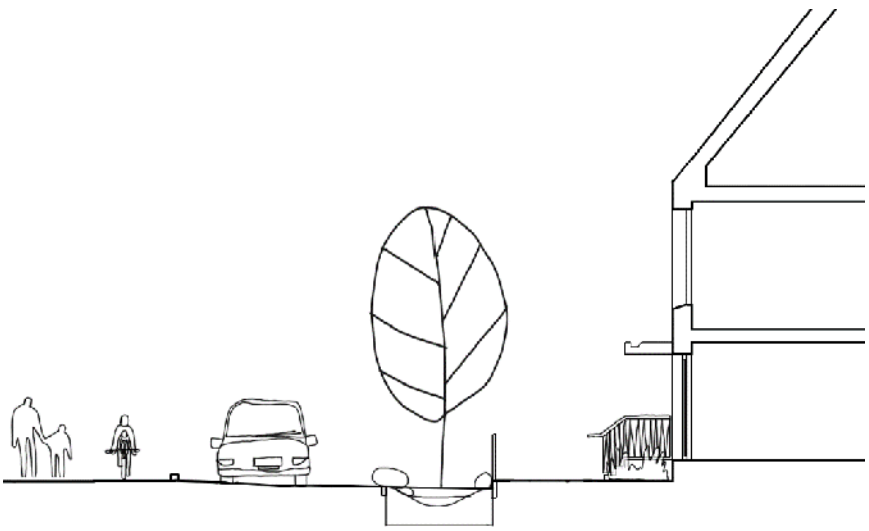


Fig 17: Edge of development street typical section

SuD streets

SuD streets are linear green ‘streets’ between the fronts of houses. These provide a car free network and promote active outdoor activities, albeit their main role is to provide sustainable surface water drainage and retention. Given Hull’s topography and especially this site’s location, it is essential that above ground SuDS are an integral design feature of the development and ‘SuD streets’ will be a distinctive and exemplar feature of the development.

Safety and accessibility

The SuD streets are placed along clear pedestrian desire lines to ensure usage; they should feel safe and accessible to all residents. A comfortable sense of enclosure height : width ratio) makes spaces feel safe and comfortable and are more likely to be used. Natural surveillance also makes public spaces feel safe and inviting.

Surrounding homes should clearly look onto the SuD streets. Visual barriers such as fences or walls should be kept low, a clear view from one end to another is important. Gentle curves in the path are advised to provide an element of interest, right angle turns or sharp inclines and declines in height should be avoided to provide equal access to all. As the SuD will be at the front of houses and will connect residents to amenities, the same amount of street-lighting is expected as on a more traditional residential street. SuD Street frontages must be car free.

Corridors for people and wildlife

Seating should be interspersed throughout the pedestrian routes either through formal benches set back from the main pathway but looking onto it, or informal seating that introduces an element of play, such as grassy mounds, or ledges set into the SuD’s boundary.

Trees should be carefully planted to provide shading during summer and allow sunlight to enter homes during winter. Tree types should support local ecology and bed planting should support bees and other wildlife and provide green corridors to support the surrounding habitats. Consideration should be given to how planting will look in all four seasons.

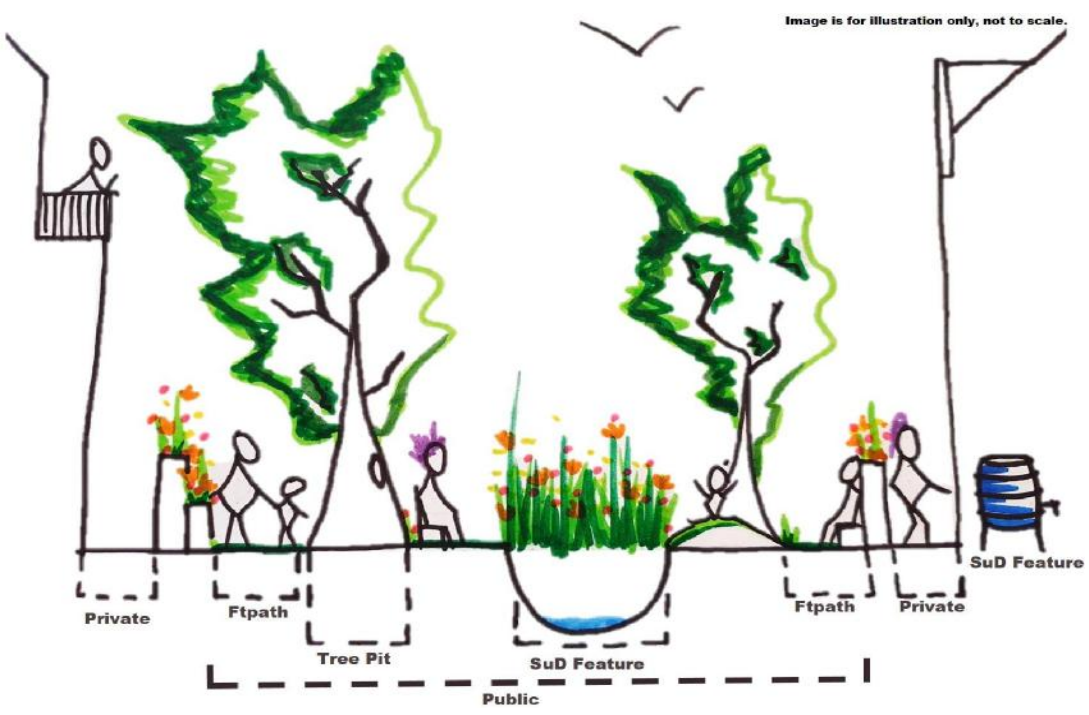


Fig 18: Section diagram demonstrating the ‘SuD street’ concept building line to building line

Fig 19: Example of a 'SUD Street' at St. Chad's, Thurrock. Cars are excluded from the street and the swale is made the focus for the main pedestrian route.

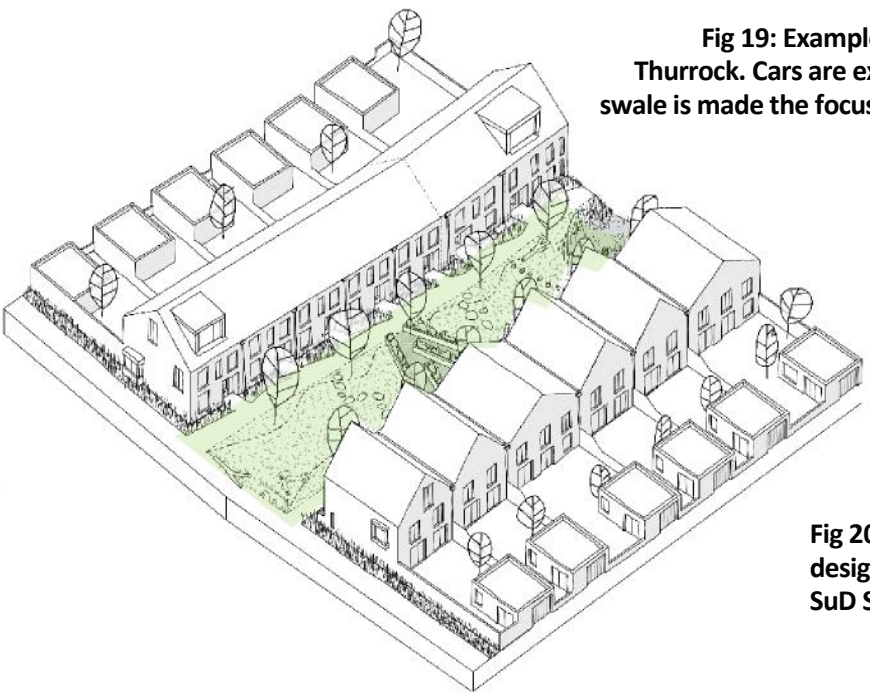


Fig 20: A concept design for the 'East Carr SuD Streets'

Thresholds and boundary treatments

Use of public space is largely dependent on the perceived sense of safety. It is important that visibility between homes across the SuD streets is preserved.

Low fences or planters should be used to help animate the SuD and support natural surveillance, but crucially provide a definite boundary between the public and private realm. Robust, integral boundary treatments will deter residents from putting up their own defensive boundary treatments, which inhibit social interaction and sense of community.

Fig 21: Marmalade Lane, Cambridge strikes the balance between public and private using planting and seating as boundaries

SuDS everywhere

Given the essentially green character of the site, and the high flood risks every opportunity should be taken to create spaces for planting and growing and to absorb excess rainfall. Boundary treatments provide an excellent opportunity to do this front and back. At the front of properties small areas of enhanced planting belonging to residents provide opportunities for social interaction and casual surveillance.

At the rear raised planters could be incorporated in boundary walls and dividing walls between plots and/or between patios and lawns. Shared inner courtyards can be made more pleasant, sociable spaces through the introduction of micro-allotments and planter beds that double as rain gardens. This could be on an individual basis or collective shared arrangement.

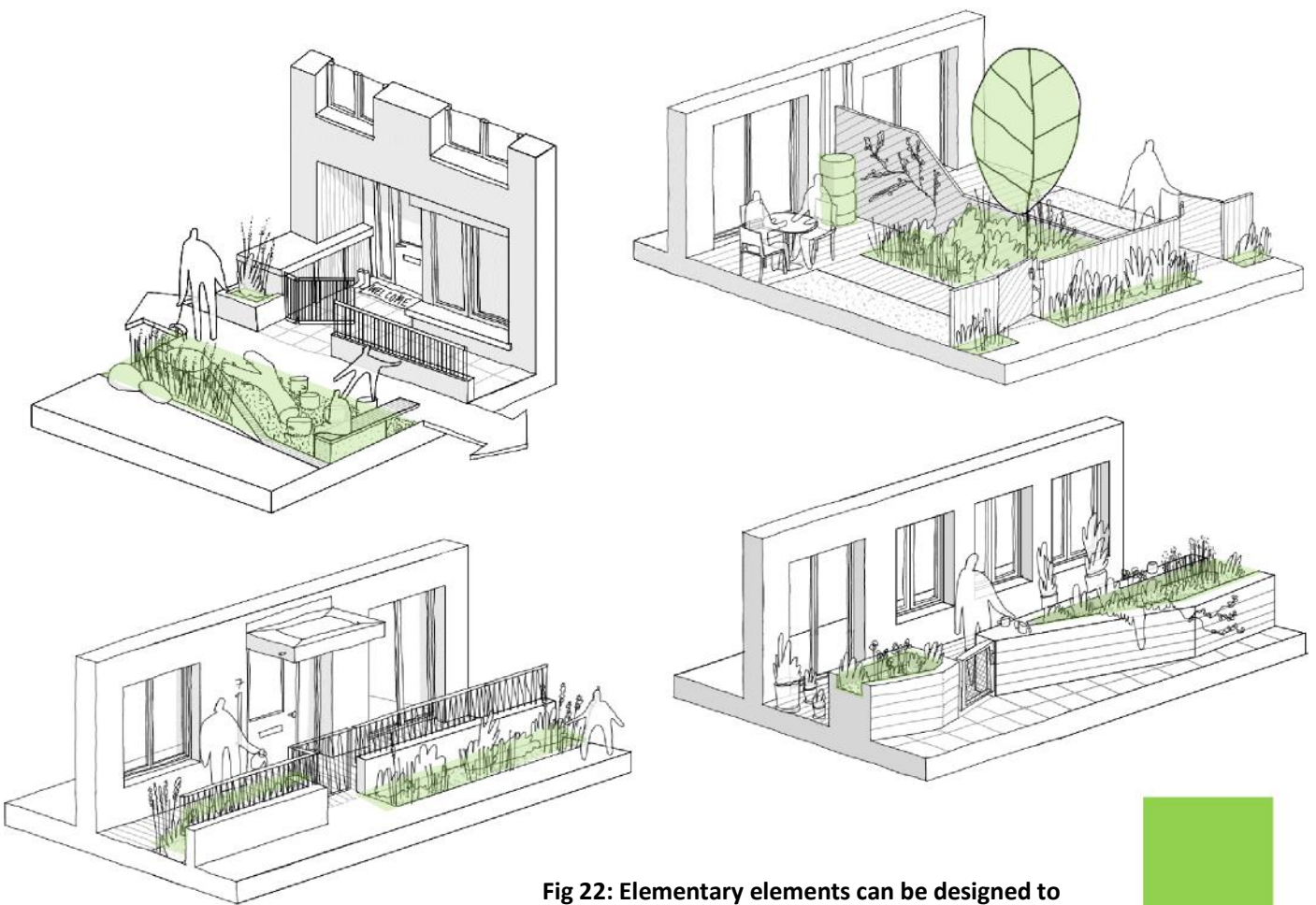


Fig 22: Elementary elements can be designed to support the sustainable drainage strategy for the development, whilst providing opportunities for play, growing spaces and neighbourliness

7

Spatial Masterplan

7.1 Draft East Carr Masterplan

A compact and walkable layout designed through an iterative process of detailed analysis of existing site conditions i.e. flood zones and existing landscape features, and the surrounding context i.e. existing settlement and Castle Hill. The proposed layout demonstrates strategies for integrating a suburban grain into a distinctive grid and block structure defined by a hierarchical street network supporting open spaces, commercial elements envisaged as being primarily food retail, pedestrian movements, SUDS, parking and internal courtyards.

The draft masterplan shown in figure 23 provides the basic layers required for an acceptable new residential development providing 689 plots (can vary) at a density of 32 dph (can vary). The scale of development is slightly below the indicative figure in the Local Plan but reflects the requirements established in this document. The uniformity of grids and blocks creates a clearly defined residential layout that is street-focused with buildings fronting onto the public realm, and private spaces at the back. Perimeter blocks make efficient use of space, maximise connections across the site to ensure opportunities for different routes to be taken, and encourage walking and cycling. Blocks are informal to create a suburban character and their uniformity is loosened up with courtyards or mews streets that activate and give access to the spaces at the centre of the blocks.

The masterplan proposes a ‘green heart’ which is regarded as a viable location for a community and commercial building providing facilities such as a café, crèche, changing rooms and public WCs.

Fig 23: Draft East Carr Masterplan

Fig 24: Draft East Carr Masterplan showing one possible route of bus loop

Fig 25: Legend (zoomed in)

Appendix A – Relevant policies from the Hull Local Plan Policies

Policy 3

Housing requirement and site allocations

Housing requirement

1. The housing requirement for Hull is a minimum of 9,920 (net) new homes during the period 2016 to 2032 (620 dwellings per year).
2. The overall delivery of housing in Hull and the East Riding will be monitored to ensure that needs are being met across the two local authority areas.

Housing site allocations

3. Sites are allocated to accommodate around 11,700 dwellings to provide flexibility and choice in land for housing development.
4. The sites listed in Tables 5.7 - 5.10, 5.12 and 5.13, and shown on the Policies Map, are allocated for housing development.
5. The sites listed in Table 5.11, and shown on the Policies Map, are allocated for housing development in the Kingswood Area Action Plan.
6. Housing allocations should be developed with regard allocations should be developed with regard to the relevant development brief where one exists - as listed in Table 14.3 in Chapter 14.
7. The Council will ensure that a minimum 5-year supply Council will ensure that a minimum 5-year supply of deliverable housing sites is available in Hull.

Policy 14

Design

Development should demonstrate how its design supports the delivery of a high quality environment in Hull, particularly with regard to:

a. the relationship between the development and the surrounding built form of the city in terms of:
   i. character
   ii. use and surrounding uses
   iii. layout and connectivity
   iv. setting and relationship to key heritage assets
   v. scale
   vi. massing
   vii. grain and density
   viii. architectural structure and enclosure
   ix. detailing and materials;

b. encouraging active and healthy lifestyles;

c. providing landscaping which retains natural features where possible;

d. providing inclusive access;

e. opportunities to promote public safety and minimise the risk of crime;

f. the creation of inclusive public spaces which encourage community interaction through:
   i. inclusive design

ii. active frontages
iii. high quality public realm
iv. appropriate soft and hard landscaping
v. minimising the potential for anti-social behaviour
vi. providing public art where appropriate;

g. ensuring where development is proposed in the city centre, its design and landscaping complements the 2016/17 materials in the public realm. Where possible, this will involve the use of the same palette of materials.

Development which does not meet these criteria will be refused.

Policy 15

Local distinctiveness

1. Development should promote local distinctiveness where appropriate, with particular reference to:
   a. improving access to and making effective use of the Port, the city's waterfront and maritime assets along the River Hull and the Humber Estuary whilst taking account of flood risk;
   b. creating a network of landmarks in prominent or gateway locations to develop legible local references that distinguish parts of the city;
   c. encouraging contemporary of architecture that respects the city's heritage, creating positive and distinctive contributions to enrich the built fabric;
   d. the setting, character and appearance of Listed Buildings, Conservation Areas and other heritage assets;
   e. way-marking arterial routes; and
   f. ensuring proposals, including those on allocated sites, accord with any adopted masterplan, development brief or local development order.

2. The of tall buildings (above 30m in height) in and around the city centre, as shown on the Policies Map, must demonstrate that:
   a. they would not harm the character or appearance of the city centre Conservation Areas which are characterised by their low rise nature;
   b. they would not harm the setting of heritage assets;
   c. they would not harm the distinctive, historic skyline;
   d. there would be an acceptable impact on views and vistas across and within the city centre; and
   e. they are providing a positive contribution to the skyline through a high standard of design.

Policy 21

Designing for housing

1. Housing development should be designed according to Building for Life principles and will be required to achieve at least 9 green scores out of 12, minimise amber scores and avoid red scores. Housing development should be designed according to Building for Life principles and will be required to achieve at least 9 green scores out of 12, minimise amber scores and avoid red scores.

2. Housing density will be expected to be in the range of 30-40 dwellings per hectare unless the character of the surrounding area justifies otherwise, except in the city centre as shown on the Policies Map, where higher densities may be acceptable subject to the specific circumstances of the site and its surroundings.

3. Housing development should provide accessible and adaptable dwellings that meet Building Regulation M4(2) standard in at least 25% of market housing and at least 50% of affordable housing, unless:

    a. in all housing Market value Zones, a detailed assessment of feasibility is provided by the developer; and demonstrates that a reduced level of provision is justified; or

    b. in Housing Market Value Zones 1 and 2 only, a detailed assessment of viability is provided by the developer and demonstrates that a reduced level of provision is justified.

The Council will seek to deliver wheelchair user dwellings that meet Building Regulation M4 (3) standard on suitable housing sites, where there is a demonstrated need for such accommodation in that specific area.

Policy 26

Location and layout of development

Development should:

1. provide all user modes of transport with safe, convenient, and direct access, where relevant, to:
    i. the road network;
    ii. bus transport (e.g. bus stops) (maximum walking distance 400m);
    iii. rail and water transport;
    iv. pedestrian routes;
    v. cycle routes;
    vi. public rights of way; and
    vii. local services and facilities (maximum walking distance 400m);

2. provide within the site, where practicable:
    i. public transport facilities;
    ii. cycle and walking facilities (including secure covered cycle parking areas);
    iii. initiatives to reduce congestion and air pollution;
    iv. layouts to assist accessibility for mobility impaired;
    v. adequate parking provision for cars and powered two-wheelers;
    vi. a choice of travel, encouraging modes of transport which conserve energy and reduce pollution impact on human and environmental receptors; and
    vii. provision or retrofitting of electric charging points or other alternative fuel sources. Parking standards for electric charging points are given in Appendix C for residential and non-residential development.

3. deliver, where relevant:

i. proposals that are acceptable in terms of traffic generation and road safety;

ii. proposals that, in terms of traffic generation and road safety impact, do not compromise the delivery of allocated development sites shown on the Policies Map;

iii. proposals, in terms of the A63/ A1033 (Strategic Road Network), that can be accommodated within the existing capacity of a section (link or junction), or they do not increase demand for use of a section that is already at full capacity unless it can be demonstrated that mitigation measures can be introduced to address the projected impact;

iv. new cycle, pedestrian routes, public transport facilities which serve the site; and

v. cycle and pedestrian access to and along rivers and waterways.

Policy 39

Sustainable Drainage

1. All development should incorporate sustainable drainage systems (SuDS) unless it has been demonstrated this is not technically or economically feasible. Major development should be accompanied by a Drainage Impact Assessment.

2. The Drainage Impact Assessment should account for the following:

   a. run-off rates for greenfield sites should not exceed 1.4 litres per second per hectare;

   b. run-off rates for brownfield sites should not exceed 50% of the current run-off rate;

   c. the on-site drainage system should be capable of storing water for the 1 in 75 year (1.33% annual probability) rainfall event;

   d. the site should be capable of storing the water from a 1 in 100 year (1% annual probability) rainfall event;

   A 30% allowance should be added to the above requirements to account for climate change and to ensure that the development is safe for its lifetime.

3. The drainage system should be designed so that in the event of the system failing or the tolerances being exceeded, no surface water flooding is caused to habitable buildings on- or off-site.

4. Site layout should have regard to any relative flood risk within the site and any existing features which could support sustainable drainage on-site.

5. Sustainable drainage systems must be designed with regard to Source Protection Zones.

6. Applications should demonstrate how the long term maintenance of the sustainable drainage system will be assured.

Policy 40

Addressing Flood Risk in planning applications

1. Built development in in Flood Zone 3b as shown on Policies Map is not acceptable unless of a water compatible use or essential infrastructure that has passed the Exception Test.

2. Sequential Tests and Flood Risk Assessments should have regard to the local sub-division of Flood Zone 3a.

3. Development of sites or uses not allocated on the Policies Map must be supported by a Sequential Test and Exception Test as required by the Council's current standing advice.

4. Development which requires a Flood Risk Assessment and/ or the Exception Test as set out in the standing advice must demonstrate that appropriate flood mitigation, flood resilience

and where appropriate, sustainable drainage measures have been incorporated in its design and layout.

5. The area of search for the Sequential Test should be the local authority boundary except in the following circumstances:

   a. for city centre development, the area of search should be the defined city centre;

   b. for development of one or two dwellings that would fall within Use Class C3(a), the area of search should be the ward in which the application site is located.

Policy 42

Open space

Open space sites

1. The Policies Map shows the following sites:-

   a. Existing open space sites that are 0.1 hectares or greater; these are listed in Table 12.4.

   b. New open space allocation site 1. Schemes which encourage people to visit, view and engage with the scheduled monument (South Blockhouse) will be supported but such schemes should consider the South Blockhouse as an importance archaeological feature. Designs for public open space in this area should aim to incorporate the archaeological findings and present them in an accessible way.

   c. New and existing green space in the Kingswood area. The detailed allocations are made within the Kingswood Area Action Plan.

   d. The design/layout of new open spaces should give consideration where appropriate, to the provision of facilities for dog walkers but not where this recreational activity on the site would have an adverse impact on the integrity of the Humber Estuary International Site.

Open space standards

2. Schemes that increase open space provision, particularly in order to rectify identified deficits, will be supported.

Existing open space protection, including all open spaces that meet the criteria for open space contained in Table 12.1

3. Open space, sports and recreational buildings and land, including playing fields, should not be built on unless:

   a. An assessment has been undertaken which has clearly shown the buildings or land to be surplus to requirements, including consideration of population growth over the plan period, its amenity value, and its strategic function. The assessment should fully consider the potential to re-use the site to address deficits for all types of open space in the area; or

   b. The loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or

   c. The development is for alternative sports and recreational provision, the needs for which clearly outweigh the loss.

On-site open space requirements

4. On-site open space requirements for the Local Plan's housing allocation sites that require

open space provision within them are listed in Table 12.5.

5. Housing windfall sites may require on-site open space to make them acceptable in planning terms, where there is or will be a deficit of open space and it is practicable to do so. The on-site open space should provide for the needs of the estimated future population of the development. The on-site open space requirements will be based on the latest assessment of open space need, and the standards listed in Tables 12.2 and 12.3.

6. Where it is demonstrated that it is not feasible to provide on-site open space, it will be provided off-site through a legal agreement securing a financial contribution.

Policy 43

Green infrastructure and the Green Network

1. Development that adversely affects the continuity and value of the Green Network, as designated on the Policies Map and Table 12.4, will not be permitted.
2. Development within or in close proximity to the Green Network should seek to protect and/ or enhance the functionality and connectivity of the corridor.
3. Development adjacent to the River Hull should include a minimum of 8 metre space (unless otherwise agreed) to allow for:
    a. a north-south pedestrian and cycle way;
    b. flood defences as required to project the city;
    c. contractors to access and maintain existing and proposed flood defences: and
    d. projection of wildlife corridors.
4. Development should incorporate and enhance existing and/ or new green infrastructure features within their design, proportionate to their scale.
5. The Policies Map shows the Green Network in the Kingswood area. The detailed allocations are made within the Kingswood Area Action Plan.