



LIZARD

Landscape Design and Ecology

HNW ARCHITECTS LTD

LAND NORTH OF TODDINGTON LANE - SITES A & B

Littlehampton, West Sussex

Landscape Design Strategy

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1.0 INTRODUCTION

General

- 1.1 Lizard Landscape Design and Ecology has been commissioned by *HNW Architects Ltd* to develop a Landscape Design Strategy for Land North of Toddington Lane at Littlehampton, West Sussex.
- 1.2 The Landscape Design Strategy sets out the design intent and objectives of the proposed landscape scheme as well as provides the outline planting palette and nursery stock specification considered appropriate and beneficial for the proposed scheme.
- 1.3 The design strategy was informed by desk study and a site visit undertaken on the 14th June 2021 to appraise existing features on Site and the surrounding area.
- 1.4 The Landscape Design Strategy for the development at Land North of Toddington Lane, Littlehampton has been prepared by Gareth Lidgate (Landscape Architect BA (Hons) LA DipLA); Assistant Landscape Architect and reviewed by Suzie Lieber (Landscape Architecture MSc, CMLI), Senior Landscape Architect at Lizard Landscape Design and Ecology, Worthing.



Legend

- Site Boundary
- North Littlehampton Development Boundary
- Character Area SC11 - Littlehampton and Worthing Fringes

Figure 1. Landscape Context



EXTRACT A - T & L CRAWLEY NO 2 LLP OWNERSHIP PLAN

2.0 EXISTING SITE INFORMATION

The Site

- 2.1 The development site (referred to as 'the Site') encompasses sites A and B within the Commercial Hub of 'Hampton Park', located to the west of the newly constructed Lyminster Bypass, to the northern edge of Littlehampton, West Sussex (Grid Reference: TQ 03077 04159) (see **Extract A**).
- 2.2 The Commercial Hub is the furthest north-west portion of the larger North Littlehampton Committed Site (Hampton Park), approved and commenced prior to the Local Plan 2011-2031 being adopted. The North Littlehampton site is located in the Toddington area of Littlehampton, to the north of the railway line (see **Extracts B and C**).
- 2.3 Sites A and B are separated by an east-west access road to Lyminster Bypass. The spur road leads to the existing recycling site to the west.
- 2.4 The topography within the Site is sloping down towards the north; the surface levels range from approx. 7.2 m aOD to approx. 3 m aOD. The most notable change in levels occurs at the north and north western boundaries, where the ground slopes down sharply as it leaves the site's boundary.



EXTRACT B - NORTH LITTLEHAMPTON MASTERPLAN - CHARACTER AREAS



EXTRACT C - NORTH LITTLEHAMPTON MASTERPLAN - COMBINED PLAN



Photograph A - A cleared and largely leveled site allowing for the temporary establishment of self-seeded ruderal ephemeral / short perennial growth.



Photograph B - To the north and west boundaries lie dense layers of scrub to the base of mature trees.



Photograph C - Lines of standard stock trees and hedgerow whips have been planted to the roadside edges to the boundaries of sites A and B.

Existing Vegetation

- 2.5 The Site has been cleared of existing structures and vegetation to enable access. What remains on site is largely self seeded ruderal ephemeral / short perennial growth (See **Photograph A**). To the north and west boundaries dense scrub surrounds the base of mature trees (See **Photograph B**). Trees noted around the site are mostly semi-mature and mature white poplars (*Populus alba*) growing along the northern border of Site B, other trees include cypress (*Cupressacea*) and, rarely, eucalyptus (*Eucalyptus sp.*), princess tree (*Paulownia tomentosa*) and laurel (*Prunus laurocerasus*).
- 2.6 As part of the development of the adjacent southern section of the Lyminster Bypass, lines of standard stock trees and hedgerow whips have been planted to the roadside edges to the boundaries of sites A and B (See **Photograph C**). These are largely native tree species or the ornamental varieties, such as pyramid oak (*Quercus robur* 'Fastigiata'), small leaved lime tree (*Tilia cordata* 'Green Spire'), common beech (*Fagus sylvatica*), and Norway maple (*Acer platanoides*). These trees have been underplanted with native saplings and whips of field maple (*Acer campestre*), common dogwood (*Cornus sanguinea*), common hazel (*Corylus avellana*), common hawthorn (*Crataegus monogyna*), crab apple (*Malus sylvestris*), whitebeam (*Sorbus aria*), elder (*Sambucus nigra*), and goat willow (*Salix caprea*).
- 2.7 For details refer to the *Preliminary Ecological Appraisal by Lizard Landscape Design and Ecology*.



Photograph D - View south towards the proposed development site from bridleway to the north.



Figure 2 - Satellite view of the surrounding landscape to the north of the Site and extent of Photograph D.

Surrounding Landscape

- 2.8 The site is located to the north of the parish of Littlehampton in a predominantly residential environment. Land to the north is more open, dominated by agricultural land interspersed with mature tree / hedge lines. The southern boundary of the site is bordered by residential properties to the south and west by a parcel of land (Persimmon Homes Phase 1) which comprises 114 occupied dwellings, with the residential area of Toddington located just beyond the railway line c. 366 meters (m) to the south. Most of the surrounding landscape is residential, with the built mass of Littlehampton stretching out c. 4.5 kilometres (km) to the south-east.
- 2.9 Views of the proposed site from the north stretch across countryside and Black Ditch (c. 150 m to the north of the Site), a historical waterway (See **Photograph D**). Views into the site from this perspective are partially obscured by an existing tree and scrub line.
- 2.10 The key landscape characteristics of the wider setting to the north include: low lying flat open landscape, meandering rife and straight drainage ditches, medium scale arable farming, and a low density of native hedgerows and hedgerow trees, interspersed with shelterbelts, single species hedges or individual standards planted using tall trees such as Poplar, and the nucleated village of Poling to the north-east.

2.11 The Site is located adjacent to Landscape Character Area SC11 Littlehampton and Worthing Fringes (See **Figure 1**). Key characteristics of the LCA are detailed below, as stated in the Landscape Character Assessment of West Sussex (2003):

- *'Low lying flat open landscape;*
- *Dominant urban fringe with major conurbations of Littlehampton;*
- *Settlement edges often sharply contrast with adjacent open countryside;*
- *Frequent urban fringe influences of horse paddocks, light industry, airport, and recreational open space;*
- *Medium scale arable farming and market gardening, with clusters of greenhouses;*
- *Meandering rifes and straight drainage ditches;*
- *A low density of native hedgerows and hedgerow trees, interspersed with shelterbelts, single species hedges or individual standards planted using tall trees such as Poplar, Monterey Pine and Tulip trees;*
- *Nucleated villages such as at Poling scattered across the area;*
- *Mixed building materials of flint, brick, half timber and stone;*
- *Occasional farmsteads along roads, and on dead-end tracks;*
- *Long views to the Downs;*
- *Busy minor and major roads;*
- *Industry in the countryside.'*

3.0 POLICY CONTEXT AND GUIDANCE

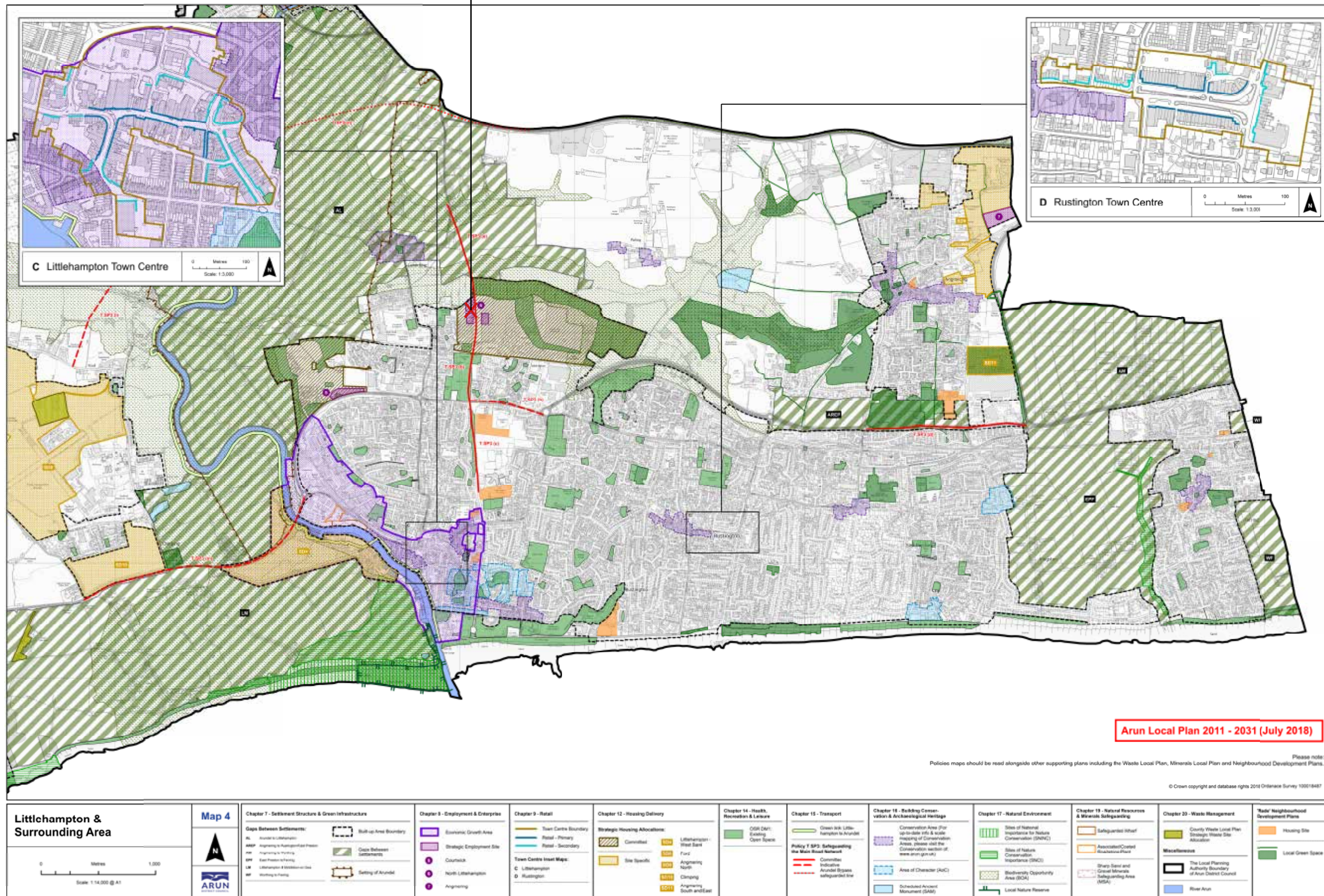
Adopted Arun Local Plan 2011-2031 (July 2018)

- 3.1 The Local Plan has been reviewed and the policies considered relevant to the landscape design has been collected below:
- 3.2 Policy SD SP2 - Built-up Area Boundary: *'Built Up Area Boundaries are defined for the main towns and villages in the District and shown on the Policies Maps. Development should be focused within the Built Up Area Boundaries and will be permitted, subject to consideration against other policies of this Local Plan.'*
- 3.3 Policy C SP1 - Countryside: *Outside the Built-Up Area Boundaries (as identified on the Policies Maps) land will be defined as countryside and will be recognised for its intrinsic character and beauty.*
- a. Development will be permitted in the countryside where it is:*
- b. for quiet, informal recreation; or*
- c. for green infrastructure; or*
- e. for road and/or cycle schemes; or*
- f. in accordance with other policies in the Plan which refer to a specific use or type of development.'*
- 3.4 Policy GI SP1 - Green Infrastructure and development: *'All major development must be designed to protect and enhance existing Green Infrastructure assets, and the connections between them, in order to ensure a joined up Green Infrastructure Network. The Green Infrastructure Network must be protected from light pollution to ensure that areas defined by their tranquillity are protected from the negative effects of light in development.*
- Where compatible with nature conservation objectives, development proposals must identify opportunities to connect existing Green Infrastructure assets ...'*

- 3.5 Policy LAN DM1 - Protection of landscape character: *'...Development throughout the plan area should respect the particular characteristics and natural features of the relevant landscape character areas and seek, wherever possible, to reinforce or repair the character of those areas*
- The historic character and development pattern of settlements within the District should be respected, taking into account their distinct identity and setting'.*
- 3.6 Policy H SP1 - The Housing requirement: *'Within the plan period 2011 – 2031 at least 20,000 new homes will be accommodated in the District.'*
- 3.7 Policy ECC SP1 - Adapting to climate change: *'The Council will support development which is located and appropriately designed to adapt to impacts arising from climate change such as the increased probability of tidal and fluvial flooding; water stress; health impacts as a result of extreme temperatures and a decline in the quality of habitats and richness of biodiversity.*
- In order to achieve this, development must be designed to take account of the following issues:*
- a. Location (in relation to flood risk ...);*
- b. Water efficiency;*
- c. Shade, cooling, ventilation, solar gain;*
- d. Connectivity to the green infrastructure network;*
- e. Layout and massing;*
- f. Resilience of ... building materials to extreme weather events;*
- g. Capacity of drainage systems and incorporation of Sustainable urban Drainage Systems (SuDS).'*

- 3.8 Policy HWB SP1 - Health & Wellbeing: *'All development shall be designed to maximise the impact it can make to promoting healthy communities and reducing health inequalities. In particular regard shall be had to:*
- a. Providing or contributing to the necessary infrastructure to encourage physical exercise and health, including accessible open space, sports and recreation facilities (including outdoor fitness equipment) and safe, well promoted, walking and cycling routes...*
- 3.9 Policy OSR DM1 - Open Space, sport & recreation: *'...2. Open space, sport and recreation in new developments:*
- Housing ... will be required to contribute towards:*
- a. Open space provision in accordance with guidance set out in the current Open Space Study. In some parts of the District open space provision is identified as being sufficient in terms of quantity. Therefore, provision of new open space is not deemed necessary but what is needed is to seek contributions for quality improvements and/or new offsite provision in order to address any future demand...*
- 3. Local Green Space and Neighbourhood Plans**
- Local Green Space is not identified in this Local Plan but will be designated in Neighbourhood Plans in circumstances where the criteria in paragraphs 99 and 100 of the National Planning Policy Framework (49) are met.*
- 4. Quality expectations**
- Developments with respect to all of the above shall have regard to the 'Secured by Design' guidance documents and shall also be consistent with all other Local Plan policies.'*
- 3.10 Policy ENV SP1 - Natural Environment: *'Arun District Council will encourage and promote the preservation, restoration and enhancement of biodiversity and the natural environment through the development process... Where possible it shall also promote the creation of new areas for habitats and species.'*

The Development Site



Extract D. Arun Local Plan (Adopted July 2018) Policy Map 4

- 3.11 Policy ENV DM3 - Biodiversity Opportunity Areas: The Site is just south of the designated BOA, therefore enhance green infrastructure and ecological connections should be included in the proposals:

'Development shall:

- a. Retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and stepping stones*
- b. Be designed in order to minimise disturbance to habitats*

Development proposals that do not reasonably address opportunities for enhancing these through their design, layout and landscaping or access/management shall not be permitted.

Where a development scheme would result in a habitat loss, mitigation measures will be proposed as part of the proposed scheme and such measures agreed with the Local Planning Authority prior to the determination of any planning application.

Within Biodiversity Opportunity Areas (BOAs) identified on the Policies Maps or where likely to have an impact on species or habitats within the BOAs, any application for planning permission shall include a properly conducted survey of the presence of that species and habitat and impact(s) that development may have on the BOA.'

- 3.12 Policy ENV DM5 - Development and biodiversity

'Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.'

Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person.

All developments shall have regard to Natural England's standing advice for protected species.

- 3.13 Policy W SP1 - Water: *'Arun District Council will encourage water efficiency measures in order to ... enhance the quality of the water environment which supports a range of habitats and ecosystems. Development will be encouraged to make active use of surface water as a design feature and permitted where it ... provides additional flood relief.*

The Council will also support development that:

- a. is ... taking account of flood risk and promotes the incorporation of appropriate mitigation measures ... particularly Sustainable Drainage Systems that reduces the creation and flow of surface water and improves water quality;*
- b. reduces the risk ... from flooding whilst increasing biodiversity;*
- c. delivers a range of community benefits including enhancing the quality of life and providing greater resistance to the impact of climate change.'*

- 3.14 Policy W DM2 - Flood risk: *'Development in areas at risk from flooding, identified on the latest Environment Agency flood risk maps and the Council's Strategic Flood Risk Assessment (SFRA), will only be permitted where all of the following criteria have been satisfied:*

- a. The sequential test in accordance with the National Planning Policy Guidance has been met.*
- b. A site specific Flood Risk Assessment demonstrates that the development will be safe, including access and egress, without increasing flood risk elsewhere and reduce flood risk overall.*
- c. The sustainability benefits to the wider community are clearly identified.*
- d. The scheme identifies adaptation and mitigation measures.*
- e. Appropriate flood warning and evacuation plans are in place; and*
- f. New site drainage systems are designed to take account of events which exceed the normal design standard i.e. consideration of flood flow routing and utilising temporary storage areas.'*

- 3.15 Policy W DM3 - Sustainable Urban Drainage Systems: *'To increase the levels of water capture and storage and improve water quality, all development must identify opportunities to incorporate a range of Sustainable Urban Drainage Systems (SUDS), appropriate to the size of development, at an early stage of the design process.*

Proposals for both major and minor development proposals must incorporate SUDS within the private areas of the development in order to provide source control features to the overall SUDS design. These features include:

- Green roofs
- Permeable driveways and parking
- Soakaways
- Water harvesting and storage features including water butts.

Proposals for major development must also integrate SUDS within public open spaces and roads, ... SUDS must therefore be integrated into the overall design of a development and must:

- Contribute positively to the appearance of the area, integrating access to allow maintenance of existing watercourses and the system;
- Effectively manage water (including its quality);
- Accommodate and enhance biodiversity by making connections to existing Green Infrastructure assets and
- Provide amenity for local residents (ensuring a safe environment)
- Retain the existing drainage network of the site and the wider area,
- Be maintained in perpetuity, supported through a Maintenance and Management Plan/Regime, including its financing, agreed with the Local Planning Authority.'

- 3.16 Policy QE DM1 - Noise pollution:
- '1. New noise sensitive development

Residential development likely to experience noise from road, ... must:

- Be ... designed to ensure that residents will not be adversely affected by noise.
- Consider ... any increase [in noise] that might be reasonably expected in the foreseeable future....

2. New noise generating development

...Proposals will need to be supported by:...

c. Evidence to demonstrate that the development will not impact upon areas identified and valued for their tranquillity, including Gaps Between Settlements which are important to the enjoyment of Arun's countryside, its habitats and biodiversity.'

- 3.17 Policy QE DM2 - Light pollution: 'Planning permission for proposals which involve outdoor lighting must be accompanied by a lighting scheme prepared according to the latest national design guidance and relevant British Standards publications. Outdoor lighting schemes will be considered against the following criteria:
- No adverse impact on neighbouring uses or the wider landscape, particularly with regard the South Downs International Dark Sky Reserve designation;
 - Light levels being the minimum required for security and working purposes;
 - Minimising the potential glare and spillage; and
 - The degree to which outdoor lighting can be powered by on-site renewable sources.
- Where appropriate, the Local Planning Authority will seek to control the times of illumination.'

- 3.18 Policy QE DM3 - Air pollution: 'All major development proposals will be required to assess the likely impacts of the development on air quality and mitigate any negative impacts by:...
- Maximising provision for cycling and pedestrian facilities;
 - Encouraging the use of cleaner transport fuels on site, through the inclusion of electric car charging points; ...'

Littlehampton Neighbourhood Development Plan - Submission Plan (Including Post Examination Modifications) 2014 - 2029

- 3.19 Policy 2: A Spatial Plan for the Town: 'The Neighbourhood Plan concentrates future housing, economic and community-related development within the built up area boundary of Littlehampton and especially within the Fitzalan Corridor connecting the strategic housing allocations at North Littlehampton (Toddington - north of the railway) and at Courtwick Park with the Littlehampton Academy, the Town Centre, the Community Hub and 'the Green'.

The West Sussex Landscape - Land Management Guidelines

- 3.20 Land management guidelines identified for Landscape Character Area SC11- Littlehampton and Worthing Fringes have been outlined below:
- 'Strengthen the landscape framework and filter views of the urban edge through planting of woodland, tree and shrub belts and groups. Use these to screen and unify disparate suburban elements especially along roadside verges, village edges and around glasshouses.
 - Establish landscape management plans for urban edges.
 - Maintain and strengthen existing field boundaries such as hedgerows and shelterbelts. Conserve and link existing hedgerows and trees with new planting.
 - All new planting to be of coastal tolerant plants which are adapted to the maritime winds.
 - Establish new areas of planting through the creation of sheltered areas using sympathetic measures, such as low stone walls and earth mounds, and nurse species for wind protection.

- *Create a new large scale tree and hedgerow framework to complement the open, intensively farmed landscape, whilst maintaining important views.*
- *Restore field boundaries through shelterbelt planting, especially around horse paddocks.*
- *Maintain and enhance the landscape and biodiversity of rife and other existing wetland habitats such as salt marsh, mud flats and water meadows.*
- *Encourage and promote land management schemes to increase species rich grassland areas.*
- *Encourage landscape enhancements around villages and on their approaches.*
- *Conserve, manage and enhance existing village ponds.*
- *Encourage the creation of new suburban woodlands, preferably with community involvement, for recreation and to link up with existing woodlands.*
- *Encourage bold tree planting adjacent to roads to enhance both the visual and wildlife value of these areas.*
- *Encourage conservation and community involvement in urban spaces and village greens.*

Supplementary Planning Documents:

Arun Design Guide SPD (Adopted 2021 January)

- 3.21 The document has been prepared as a Supplementary Planning Document to provide further guidance on design policies contained within the Local Plan. Design guide relevant to the site and landscape proposals has been extracted below:
- *‘Create a place that is experienced as part of the local area, responding to and enhancing the features and natural resources of the site.*
 - *Work with existing landscape structures, features and trees to understand their particular qualities and characteristics.*
 - *Protect and enhance biodiversity within the development site and the wider area.*
 - *Create an accessible and easily navigable place that caters for the needs of all.*
 - *Create an attractive environment of streets and spaces with appropriate spatial definition and enclosure, suited to their location and role.*
 - *Create a network of open spaces of diverse size, scale and character, which have a clear purpose and are accessible to a wide range of potential users.*
 - *Provide private and communal residential outdoor amenity spaces which are of a high quality and can be safely and conveniently accessed by all residents.*
 - *Offer amenity to pedestrians and contribute to character and sense of place through high quality street furniture, lighting and public art.*
 - *Design for resilience and adaptability to climate change to ensure the futureproofing of developments.*
 - *Incorporate Sustainable Drainage Systems (SuDS) and other flood risk mitigation.*

Open Space, Playing Pitches, Indoor and Built Sports Facilities (Arun District Council, January 2020)

- 3.22 The Open Space Supplementary Planning Document (OS SPD) sets out Arun District Council’s requirements for the provision of open space, and it has been reviewed to inform the landscape proposals and open space provision for the Site.
- 3.23 Refer to LLD2373-LAN-REP-002 *Open Space Provision Calculations* prepared by Lizard Landscape Design for more details. The document compares requirements and proposals for open space areas and types. The document concludes that ‘due to the limited extent of Sites A and B, the required Open Space would need be provided off site, within the wider development’ of North Littlehampton. The document demonstrates that this option is viable.
- 3.24 The Open Space SPD refers to the following documents and guidelines to be followed when designing outdoor spaces:
- *Sports England’s Active Design principles;*
 - *Fields in Trust’s guidance on LAP, LEAP and NEAP;*
 - *Play England’s Design for Play: A guide to creating successful play spaces.*
- 3.25 With reference to the above guidelines, Arun District Council considers the following points to be followed when designing Public Open Spaces:
- *‘Located within new residential areas in accessible parts of the development avoiding conflict with major hazards such as busy roads and not immediately adjacent to SUDs;*
 - *Linked to local paths/cycle ways and the area beyond the development and have well placed entry points to encourage safe access;*
 - *Distributed evenly throughout the site with consideration of larger central areas of public open space which could accommodate a wider range of uses, forming a focal point for new communities;*

- *Welcoming to encourage people to use them with soft landscape features, containing high quality materials, well maintained boundaries with an attractive appearance;*
- *In areas which are overlooked by housing to provide natural surveillance;*
- *Considerate to existing and established landscape features including existing trees and hedgerows and work with these to retain and enhance them.'*

3.26 The guidance also sets out requirements for the design of Sustainable Urban Drainage Systems and Green Infrastructure. SUDS should be:

- *'A high quality and be beneficial to people and wildlife. Priority shall be given to the needs of people for recreation and enhancing biodiversity and the spaces created must work for both.'*
- *Incorporate a diverse range of SUDS solutions.*
- *Allow for sufficient open space outside the damp zone. The damp zone can be used for informal activity space but this must not be the only allocation.'*

3.27 Suitable Green Infrastructure is considered to be achieved through:

- *Resilient water management;*
- *Opportunities for recreation, health and wellbeing;*
- *Enhanced biodiversity;*
- *Mitigation for climate change;*
- *Economic growth and investment;*
- *Stronger communities;*
- *Sense of place.*



Extract E. Areas of proposed Open Space and Play Area at Site B



Extract F. Areas of proposed Open Space and Play Area at Site A

4.0 DEVELOPMENT PROPOSAL

- 4.1 Site A and B are part of the wider development of North Littlehampton and is located to the north-west of the wider development, to the west of Lyminster Bypass and to the south (Site A) and north (Site B) of the spur road leading to the adjacent Recycling Site.
- 4.2 The parcels had originally been designated for 'Character Area 2: Mixed Use Zone' (See **Extract G** and **H**) within the North Littlehampton Strategic Development Area (With reference to: North Littlehampton - Strategic Development Area - Outline Planning Application - Design & Access Statement - Volume 2: Design Guidance; by *John Thompson & Partners* - February 2011).
- 4.3 The Mixed Use Character Area is proposed to be a high density zone located around the Lyminster Bypass. Comprising of:
- '...three storey commercial buildings, including a small enterprise zone, and a care home, which will support shops and services provided in the adjacent Civic Square....These buildings provide the focus for employment in the new development and are scaled to address the bypass embankment, which relates to the new bridge over the existing railway line....'*
- 4.4 With reference to the 'Initial Development Option Appraisals' document prepared by HNW Architects (September 2021, reference 21023-HNW-XX-XX-RP-A-0001) the current proposals of Sites A and B deviate from the approved Use Zone and character area, and after a number of design options, a proposal of fully residential scheme is being brought forward.
- 4.5 The current development proposals consist of the construction of 71 new dwellings (houses and apartments) with associated hard and soft landscape scheme.
- 4.6 The development proposal aims to maintain the original vertical form and character of the mixed use zone by retaining the approved configuration of 2, 3 and 4 storey buildings facing the new Lyminster Bypass (See **Extract I**).



Extract G. North Littlehampton Masterplan - Character Areas



Extract H. North Littlehampton Masterplan - Illustration of Proposed Local Centre



Extract I. Illustrative Aerial (Option 5 in the Initial Development Option Appraisals' by HNW Architects September 2021, 21023-HNW-XX-XX-RP-A-0001)

PROPOSED LANDSCAPE SCHEME

Strategic Objectives

- 4.7 The proposed Landscape Design Strategy has been informed by a desk study encompassing planning policy context and specialist reports informing the development proposals as well as by the Site visit carried out in June 2021.
- 4.8 The primary objectives of the proposed Landscape Design Strategy are to minimise any potential effect of the proposed development on the surrounding landscape and its character, to protect and enhance existing Green Infrastructure assets, and the connections between them, in order to ensure a joined up Green Infrastructure Network, and to achieve 10% Biodiversity Net Gain ensuring compliance with the forthcoming Environment Bill. This is envisaged to be achieved by:
- Retention and reinforcement of the existing vegetation and wooded boundaries to the north and west through planting of native species, to maintain and enhance the filtering of views into the Site from the surrounding countryside;
 - Enhancement of the perception of the Site through careful soft landscape design and the addition of green roofs and walls;
 - Supporting local wildlife and connectivity by planting of native and ornamental species offering opportunities for foraging, shelter and habitat creation;
 - Assimilation in the countryside through sensitive design of hard and soft landscape features;
 - Minimising potential impact on local wildlife and landscape character by careful and sensitive design of external structures and lighting features;
 - Appropriate landscape buffer boundary treatment, providing visual and structural separation between the Site and the adjacent countryside;
- Landscape design solutions which would reduce overlooking the adjacent properties;
 - Providing or contributing to the necessary infrastructure to encourage physical exercise and health, including accessible open space, and safe, well promoted, walking and cycling routes;
 - Take into account local flood risk and mitigate the sites' contribution to added storm water run off via Sustainable Drainage Systems reducing the risk from flooding whilst increasing biodiversity and providing amenity for local residents;
 - To provide a lighting scheme with light levels being the minimum required for security and working purposes to ensure no adverse impact on the wider landscape, particularly with regard the South Downs International Dark Sky Reserve designation;
 - To mitigate any negative impacts of the development on air quality by maximising provision for cycling and pedestrian facilities, and by encouraging the use of cleaner transport fuels on site, through the inclusion of electric car charging points.
- 4.9 Adhere to Land Management Guidelines concerning Landscape Character Area SC11 - Littlehampton and Worthing Fringes to:
- Strengthen the landscape framework and filter views of the urban edge through planting of woodland, tree and shrub belts and groups;
 - And, conserve and link existing hedgerows and trees with new planting.
- 4.10 To achieve the 10% Biodiversity Net Gain through the following ecological enhancements and opportunities. Recommendations, with reference to the *Preliminary Ecological Appraisal* - prepared by *Lizard Design and Ecology* in July 2021, include:
- 'Buffer zones planted with native shrubs and suitable wildflower grassland to create a gradual ecotone between tree lines to the north and west of the site;*
 - The use of flowering plants as listed within the RHS 'Plants for Pollinators' within the soft landscape scheme;*
 - The use of seed and fruit bearing species of tree such as cherry, rowan, birch and crab apple to provide a foraging resource for birds and insect;*
 - The use of log and compost piles in habitat creation areas to provide refugia for reptiles and amphibians, with creation of a small bare earth 'bee bank' to provide habitat for mining bees;*
 - Installation of integrated bird and bat boxes into new buildings, and 'bug hotels', bird and bat boxes to mature trees;*
 - Creation of permanent waterbodies within the scheme. The ponds should have an extensive area of shallow water which is favoured by invertebrates. Native plants should be used within the pond, with non-native invasive species avoided. Fish stocking should be avoided as fish predate the eggs and larva of newts and invertebrates;*
 - The use of flowering lawn in areas which require regular mowing rather than a standard amenity mix;*
 - Green walls and roofs wherever possible;*
 - Any new closed board fencing to be erected as part of proposals should incorporate 'hedgehog friendly' gravel boards which include a 13x13cm gap to allow movement of hedgehogs;*
 - Clearance of existing dry ditches and raising of water levels through incorporation in SuDS.'*

Layout

- 4.11 The proposed development with its associated landscape scheme will be confined to within the existing north and west natural vegetative boundaries, the proposed Lyminster Bypass to the east, and the recently completed residential development to the south. It is proposed that the existing boundary vegetation would be enhanced to further soften views into the site from the countryside to the north.
- 4.12 Means of access to the Sites would be via the newly built Southern Lyminster Bypass, via a spur road off the Southern Bypass Roundabout. Site A and B would be separated and accessed from this spur road, which would also provide access to the adjacent, extended Household Waste Recycling Site.
- 4.13 The vehicular roads would be surfaced with permeable block paving, with also permeable block surfaced parking bays in contrasting colour. The pavements would also be block paved, whilst the private access paths leading to the individual entrances of the dwellings would be formed of slab paving.
- 4.14 The informal footpath to the public open spaces would be made of self-binding gravel to provide natural, permeable hard surface which is accessible to all in all weather conditions. Natural play elements would provide inclusive play space within a high quality natural environment.
- 4.15 Deciduous mature trees that contribute to the sense of separation and reinforce the edge of built-up area are considered for retention. Should retention of trees not be possible in practical terms, in relation to the considered groundworks, compensation planting of native trees congruous with the local vegetation type and character should be undertaken as soon as the groundworks are completed.
- 4.16 Incongruous exotic species (conifers and Eucalyptus) and those unviable for retention, as detailed within the Arboricultural Report, would be removed.
- 4.17 Mitigation measures and sympathetic landscape management are proposed, including planting of fast growing trees, which can create beneficial visual impact in a short period of time, alongside with slower-growing species, which would contribute in the long-term.

Site A

- 4.18 Proposed houses and apartment blocks are arranged in a formal, 90 degree grid form and they overlook the central open space, the spur road to the north or the Bypass to the east.
- 4.19 Two apartment blocks to the north-east and south-east would form part of the gateway to the wider North Littlehampton development, alongside with the apartment block at Site B.
- 4.20 Private communal amenity space would be provided to the rear of these flat blocks, with formal landscape to highlight the gateway character of the sites.
- 4.21 The properties facing the Bypass are accessed from the east, via a pedestrian path, and car parking is provided to the rear.
- 4.22 The large central open space would give space for a natural play area, surrounded by low timber knee rail fence and softened by landscape mounds and planting.
- 4.23 The play area would include grassed mounds, timber retaining walls, log play elements, willow tunnel and boulders.
- 4.24 The site would provide pedestrian links to the adjacent Hinchliff Drive to the west, whilst native boundary hedgerow would provide physical and visual barrier towards the south.

Site B

- 4.25 Proposed houses would be arranged along the 'L' shaped access road, with row of townhouses facing Lyminster Bypass to the east, or the proposed open space to the northwest.
- 4.26 The proposed apartment block, with the same design principles to those proposed to Site A, would be located to the south-eastern corner, overlooking the Southern Roundabout and Lyminster Bypass.
- 4.27 The properties to the north face outwards (towards Lyminster Bypass or the Public Open Space) and proposed to be accessed via a pedestrian path. Car parking is proposed to the rear.
- 4.28 The north and west of the site is retained as green space, providing buffer to the countryside to the north and the recycling site to the west. Proposed tree, shrub and native wildflower grassland areas would soften the development edge and provide enhanced biodiversity on site. Further ecology features such as log and compost piles, earth bank, insect hotel and bird and bat boxes would be located within the green buffer.
- 4.29 A natural, sea themed play area (Local Equipped Area of Play - LEAP) is proposed within the open space. The play area would include timber play elements with rope details, natural logs, boulders, play 'dunes', and planting. It is proposed to be secured by 1.2 m high bow top fence and accessed through 2 no. self-closing gates. The proposed play area would be overlooked by adjacent properties and would be accessible from multiple directions.
- 4.30 A pond with permanent waterbody would be located to the north of the proposed buildings, to provide wetland habitat. The attenuation area would be located to the south-western corner of the site. Both water bodies would be protected with timber fence.
- 4.31 A pedestrian and cycle link would be provided from the north-eastern corner of the site leading to the south-west of the site, linking the pavement along the proposed Bypass and the wider development areas with Sites A and B.



Legend

-  Site Boundary
-  Existing Trees Retained
-  Existing Boundary Vegetation Retained and Enhanced
-  Proposed Trees
-  Proposed Fruit Trees
-  Proposed Hedgerow
-  Proposed Ornamental Planting
-  Proposed Native Shrub Planting
-  Proposed Wildflower Grassland
-  Proposed Wetland Meadow
-  Proposed Flowering Lawn
-  Proposed Water Body
-  Proposed Landform
-  Proposed Access Road
-  Proposed Pavement
-  Proposed Private Paths and Terraces
-  Proposed Informal Footpath
-  Proposed Play Surface
-  Proposed Pergola
-  Proposed Closeboard Fence
-  Proposed Knee Rail
-  Proposed Bowtop Fence
-  Proposed Natural Play Equipment and Street Furniture

Figure 3. Proposed Layout - Site A



Legend

-  Site Boundary
-  Existing Trees Retained
-  Existing Boundary Vegetation Retained and Enhanced
-  Proposed Trees
-  Proposed Fruit Trees
-  Proposed Hedgerow
-  Proposed Ornamental Planting
-  Proposed Native Shrub Planting
-  Proposed Wildflower Grassland
-  Proposed Wetland Meadow
-  Proposed Flowering Lawn
-  Proposed Water Body
-  Proposed Landform
-  Proposed Access Road
-  Proposed Pavement
-  Proposed Private Paths and Terraces
-  Proposed Informal Footpath
-  Proposed Play Surface
-  Proposed Pergola
-  Proposed Closeboard Fence
-  Proposed Knee Rail
-  Proposed Bowtop Fence
-  Proposed Natural Play Equipment and Street Furniture

Figure 4. Proposed Layout - Site B



Native mixed-species hedgerow

*Betula pendula* (Silver birch)*Prunus padus* (Bird cherry)

Apple trees

*Corylus avellana**Lonicera periclymenum**Salix caprea**Viburnum opulus**Leucanthemum vulgare**Echinacea purpurea**Lavandula angustifolia**Salvia pratensis**Crocus species**Allium species**Deschampsia cespitosa**Carex pendula*

EM5 - Loamy Soil Meadow



EM8 - Wetland Meadow



EP1 - Pond Edge Mixture



Mown path to meadow areas and orchard

Soft Landscape

- 4.32 Through reference to the North Littlehampton - Strategic Development Area - Outline Planning Application - Design & Access Statement - Volume 2: Design Guidance; by *John Thompson & Partners* - February 2011.
- *Proposed formal tree planting should create an attractive environment for the mixed use zone.*
 - *Tree and shrub planting along the Lyminster Bypass South embankment slopes should be designed to integrate the earthworks into the townscape and filter views of passing traffic.*
- 4.33 Due to the proposed change of use, the formal planting would be limited to the communal gardens of the apartment blocks and would include ornamental planting within raised planters and climber plants to pergola structures. The rest of the scheme, specifically towards the site perimeters, is proposed to be more informal and natural, with native trees, shrubs and meadow areas.
- 4.34 The emerging soft landscape scheme would assume a multi-level plant structure offering opportunities for landscape enhancement, growing ornamental, native plants, offering food source for residents and delivering wildlife value.
- 4.35 The emerging landscape aims to provide informal green spaces for the benefit of wildlife and residents. Informal open spaces would be provided in form of natural play areas, gravel or mown paths through meadow areas, and a small community orchard with traditional variety fruit trees.
- 4.36 The private rear gardens would each be planted with a single fruit tree, and the communal gardens of the apartment blocks would be provided with pergola structure softened with flowering climber plants to enhance biodiversity and support pollinators.
- 4.37 Native mixed-species hedgerows are proposed along roads and parking areas, which would offer shelter and foraging opportunities for local wildlife and would enhance the Green Infrastructure on site, along with the native shrub planting areas and tree planting.

Group	Species Name	Origins	Container	Density	Specification
Trees	<i>Betula pendula</i>	N	BR / RB	Specimen	Heavy Standard, 3.5-4.0 m height
	Fruit Trees: <i>Apple, Pear, Plum</i>				Bare root, Medium Rootstock
	<i>Malus sylvestris</i>	N			Heavy Standard, 3.5-4.0 m height
	<i>Prunus padus</i>	N			Multistem, 3.0-3.5 m height
	<i>Sorbus aucuparia</i>	N			Heavy Standard, 3.5-4.0 m height
Native Hedgerows and Shrubs	<i>Crataegus monogyna</i>	N	BR	Double staggered rows, 5/m	60 - 80 cm height
	<i>Cornus sanguinea</i>	N		Double staggered rows, 5/m	
	<i>Corylus avellana</i>	N		1/m ²	
	<i>Lonicera periclymenum</i>	N		1/m ²	
	<i>Prunus spinosa</i>	N		Double staggered rows, 5/m	
	<i>Rosa canina</i>	N		Double staggered rows, 5/m	
	<i>Salix caprea</i>	N		1/m ²	
	<i>Viburnum lantana</i>	N		Double staggered rows, 5/m	
	<i>Viburnum opulus</i>	N		1/m ²	
Ornamental Shrubs	<i>Hebe 'Red Edge'</i>		C3	5/m ²	20 - 30 cm
	<i>Lavandula angustifolia</i>		C3	4/m ² and as specimen	20 - 30 cm
	<i>Olearia × haastii</i>		C3	3/m ² and as specimen	30 - 40 cm
	<i>Rosmarinus officinalis</i>		C3	3/m ² and as specimen	30 - 40 cm
	<i>Ribes rubrum</i>		C5	Specimen	60 - 80 cm
	<i>Thymus vulgaris</i>		C2	5/m ²	20 - 30 cm
Herbaceous Perennials	<i>Ajuga reptans</i>	N	C3	1/m ²	Herbaceous perennials to fill pot entirely, be fully rooted and present healthy growth
	<i>Anemone hupehensis</i>		Rhizomes or seeded	7/m ²	
	<i>Bergenia 'Purpurea'</i>		C2	5/m ²	
	<i>Ceratostigma plumbaginoides</i>		C2	5/m ²	
	<i>Echinacea purpurea</i>		C2	5/m ²	
	<i>Geranium pratense</i>	N	C2	5/m ²	
	<i>Leucanthemum vulgare</i>	N	C2	5/m ²	
	<i>Rudbeckia fulgida</i>		C2	5/m ²	
	<i>Salvia pratensis</i>	N	C2	5/m ²	
Bulbous Perennials	<i>Allium</i> - ornamental varieties		Bulb - 4/5	7/m ²	Healthy bulbs
	<i>Crocus species</i>		Bulb - 4/5	25/m ²	
	<i>Hyacinthoides non-scripta</i>	N	Bulb - 6/7	7/m ²	
Ornamental Grasses	<i>Carex pendula</i>	N	C2	Specimen	Full pot, fully rooted, healthy
	<i>Deschampsia cespitosa</i>	N	C2	5/m ²	
	<i>Luzula sylvatica</i>	N	C2	5/m ²	
Wildflower Mix	EM5 – Meadow Mixture for Loamy Soils	N	N/A	4g/m ²	Emorsgate or equal and approved
	EM8 - Meadow Mixture for Wetlands	N	N/A	4g/m ²	
	EP1 - Pond Edge Mixture	N	N/A	4g/m ²	
	EM2 - Standard General Purpose Meadow Mixture	N	N/A	4g/m ²	

Outline Plant Schedule and Specification

- 4.38 The soft landscape design proposals have been informed by *Preliminary Ecological Appraisal* by Lizard Landscape Design and Ecology and feature species recommended in RHS '*Perfect for Pollinators*'.
- 4.39 For details of the proposed soft landscape layout refer to *LLD2373-LAN-DWG-010-Illustrative Masterplan*.

KEY:

BR Bare Rooted Stock

C2/3/5 2/3/5 l Container Grown Stock

P9 9 cm Square Pot Grown Stock



Hard Landscape

- 4.40 Arun District Design Guide - Supplementary Planning Document (SPD)
- Materials should be natural, sustainable and locally sourced wherever possible.
- 4.41 From the North Littlehampton - Strategic Development Area - Outline Planning Application - Design & Access Statement - Volume 2: Design Guidance; by *John Thompson & Partners* - February 2011.
- "The location ... on the Lyminster Bypass means that in future these will provide a 'gateway' into Littlehampton, and a **high quality** ... landscape approach will be required, to ensure visitors receive a positive first impression of the town;"
- 4.42 The South Lyminster Bypass Roundabout will feature landscape inspired by East Beach Cafe on Littlehampton seafront. This feature is planned to be created out of railway sleepers. The East Beach Cafe is built almost entirely from weathered corten steel, which material is proposed to be brought forward within the proposed landscape of Site A and B, in form of pergolas, low bollard lighting and raised planters. Timber sleepers would form seating and retaining walls within the Public Open Spaces. Natural logs would be used to form play equipment, stepping logs and climbing features. Round logs would also appear as boundary features of these play areas, in form of low knee rail.
- 4.43 Permeable block paving would form the vehicular surfaces, with contrasting colours differentiating the use between roads and parking areas. Earth tones are prioritised to match the rest of the landscape scheme. Self-binding gravel footpath would provide an informal access path to the green spaces.
- 4.44 Having regard to the Site's close proximity of the countryside, it is proposed that any external light sources would be sensitively located and directed downwards.
- 4.45 For details of the proposed hard landscape layout refer to *LLD2373-LAN-DWG-010 - Illustrative Masterplan*.



LIZARD

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