



new brunstan strategic masterplan



NEW BRUNSTANE MASTERPLAN

This document is submitted in support of an Application for Planning Permission in Principle, August 2016.

CONTENTS

- 1 Vision & Background**
- 2 Context & Analysis**
- 3 Strategic Masterplan**
- 4 Place**
- 5 Urban Design Code**

APPENDICES

- A Site Boundary**
- B Site Sections**
- C Spatial Comparisons**
- D John Muir Way Detail Plan**

SEPARATE DOCUMENTS

- F Strategic Landscape Framework, NB_P_04B**
- G Strategic Movement Framework, NB_P_05A**
- H Strategic Masterplan, NB_P_12**



AREA assert their copyright for the diagrams, proposals and images contained in the document. In the event that these are approved to be reproduced the author must be fully credited. The report is not for onward transmission to a third party without the prior agreement of AREA.

1 vision & background

New Brunstane will be a thriving community in the heart of a parkland setting. A family friendly neighbourhood in Edinburgh with easy access to the City and beyond. Quality modern homes, school and recreation facilities will be set in a sensitively designed landscape. A place to put down roots and build new lives.

Context

EDI's vision is to create a new residential neighbourhood worthy of Edinburgh. The proposed masterplan is an illustration of how this may be achieved over time.

EDI has engaged appropriately in the same LDP plan-led process as other developers. As such, EDI has been careful, since 2012, to engage with CEC Planning Policy directly in line with the consultation protocols, and submit timely representations to the emerging LDP. In this regard, EDI has promoted the site for removal from the green belt and for residential-led development since 2012 through engagement with the City of Edinburgh Council's (CEC) Edinburgh Local Development Plan preparation process. Following the submission of detailed representations to this effect, CEC has allocated the site as a new housing proposal in the emerging Edinburgh LDP (Second Proposed Plan) (ELDP), 'HSG29 Brunstane.'

Following an examination of the ELDP Second Proposed Plan, Reporters concluded that the site should remain designated in the plan for housing development. This was subject to modified 'development principles' associated with the housing site allocation, which are addressed in this masterplan for New Brunstane.

The planning statement discusses planning policy in more detail.

Planning Permission in Principle

This application for Planning Permission in Principle (PPP) is the culmination of a lengthy process that has involved site promotion via the Edinburgh Local Development Plan (ELDP) process, active stakeholder and community consultation and technical site appraisal.

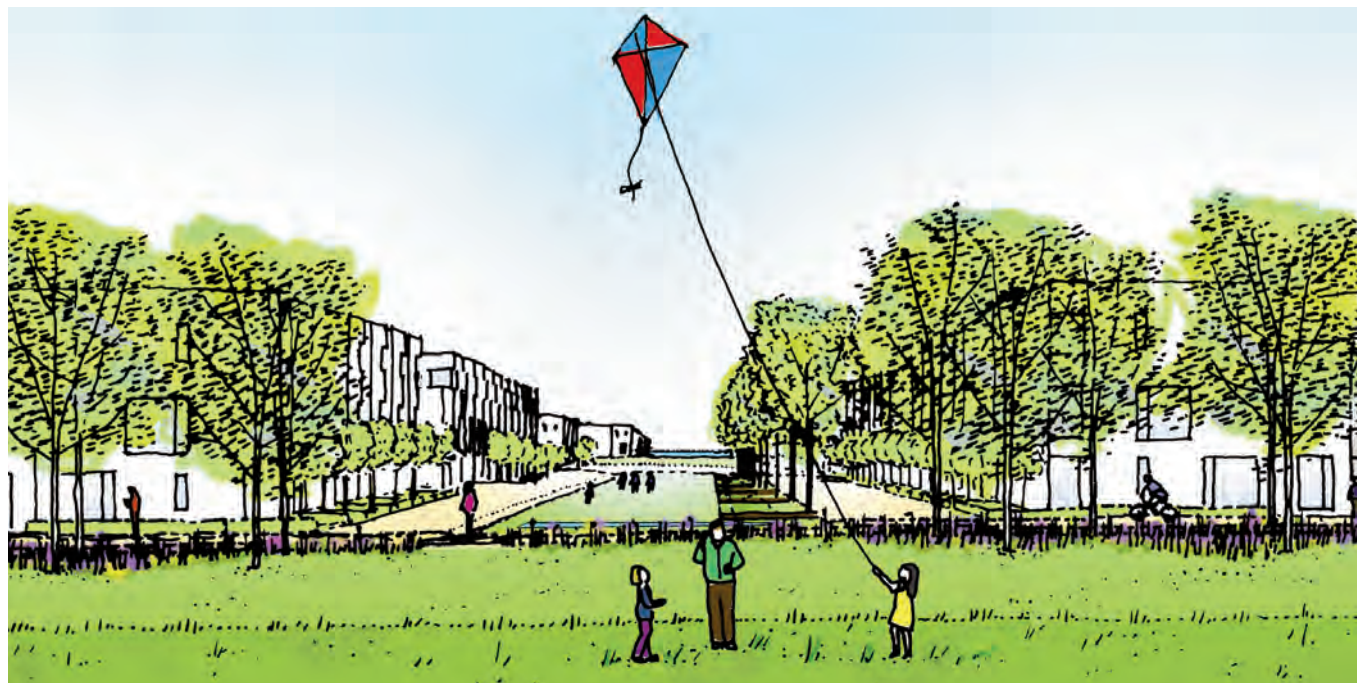
PPP is sought for the following:

Proposed residential development (including class 8 residential institutions, class 9 houses and sui generis flats), primary school (class 10 non-residential institutions), local centre (including class 1 retail, class 2 financial and professional services, class 3 food and drink, class 10 non-residential institutions and class 11 assembly and leisure), green network, means of access and transport links, infrastructure, and associated ancillary works at land north of Newcraighall Road and south of Milton Road East, Edinburgh.

Engagement

Prior to the submission of this application, EDI engaged in formal statutory and non-statutory pre-application consultation. In this regard, EDI held 2 public events and engaged in consultation with City of Edinburgh Council, stakeholders and other technical consultees.

The approach to consultation has been extensive and has extended over some 6 months since the submission of the PoAN in December 2015. For further information, please refer to the Pre-Application Consultation (PAC) report.





2 context & analysis

Introduction

The context appraisal and site analysis is an essential component to the masterplan and has two principal purposes:

- › To inform the design narrative through an understanding of the intrinsic qualities of the specific place.
- › To ensure that the design proposals fit with the technical site constraints.

We have split the analysis into the following sub-sections:

- 2.1 Site description
- 2.2 Site constraints
- 2.3 Existing movement and connectivity
- 2.4 Landscape context
- 2.5 Historical analysis
- 2.6 Urban design principles

2.1 site

The Brunstane site is located to the south-east of the city of Edinburgh, within the urban area. In the Edinburgh Local Development Plan Second Proposed Plan (June 2014), the site is removed from the green belt and allocated as a new housing proposal, HSG 29 Brunstane. As noted in earlier sections, an examination of the ELDP has recently concluded that the site should remain designated in the plan for housing development. The estimated capacity of the site is in the range of 950 – 1330 homes.

The site is c. 54.6ha in area, comprising undeveloped agricultural land which slopes gently north-east down towards Joppa and the sea beyond. It is surrounded on three sides by existing development with the housing at Newcraighall North currently under development.

The eastern edge, is on the East Lothian Council boundary and is bordered by the designed landscape of Newhailes House and mature woodland, this is marked by a stone wall enclosing the grounds. The Brunstane Burn defines the northern edge of the site, the northern bank is populated by housing at Daiches Braes, Edinburgh College: Milton Road Campus, the Milton Road Cemetery and Milton Glen golf course.

The John Muir Way footpath runs parallel to the burn, crossing to the south bank at the railway line and adjoining the northern edge of the eastern field. On the western boundary sits the A-listed Brunstane House within a walled garden. The steading and farm cottages, to the south of Brunstane House, are also listed Category B.

From within the site there are extended views out to the Forth of Firth, the Pentlands and Arthur's Seat, however, there are limited views into the site from the surrounding urban areas.

Pylons and overhead lines traverse the site, and intrude of the long views and the existing landscape setting. The site is bisected by the East Coast Main Line from north-west to south-east. An existing bridge for agricultural use forms the only vehicle crossing into the eastern fields of the development site.



2.2 site constraints

GEOLOGY CONSTRAINTS

Summary of Geology

The geology of the site comprises pockets of made ground and superficial deposits overlying Carboniferous bedrock.

The main area of made ground on the site is anticipated on the southern/south-western boundary of the site, associated with the former railway line and embankments. Localised made ground associated with historical mining is also considered likely to be present. There is a section of historical worked ground north of Wanton Walls farm.

The BGS map (NT 37 SW Drift) indicated that majority of the site is covered by raised beach deposits, except the far west of the site. The raised beach deposits in turn overlie glacial till across the whole site. The raised beach deposits are anticipated to comprise sands and gravels. The glacial till may comprise a mix of sands, gravels and clay with cobbles and boulders.

The bedrock at the site comprises sequences from the Upper Carboniferous. The far west of the site is underlain by the Upper Limestone Group; this is overlain in turn by the Passage Group, the Lower Coal Measures and the Middle Coal Measures, which sub-crop to the east of the site. The strata dip east-southeast under the site, between 74° at the west of the site to 3° at the east of the site. A north-east to south-west trending quartz dolerite igneous intrusion was noted beneath the eastern edge of the northern portion of the site area.

The BGS map indicated a postulated geological fault on the eastern side of the southern portion of the site area. The map indicated a northward downthrow of approximately 6m. The map also indicated several small faults recorded within workings in the coal seams beneath the site.

Hydrogeology

Due to the unknown composition of the previously worked ground, wide variations in permeability may exist in those limited areas of the site with made ground.

The raised marine deposits would generally be expected to be of moderate to high permeability. The glacial till would generally be expected to be of low permeability.

Limited information was available on the groundwater regime below the site. From the geological information, the rocks of the Passage Group were classified as being of moderate permeability. Fissure flow is an important element within such rocks, with fissures acting as natural conduits and causing drainage of intergranular storage.

Mining Constraints

The Upper Limestone Group, Lower Coal Measures and the Middle Coal Measures are coal bearing strata which dip under the site from sub-crop (at rockhead level) to depths in excess of 120m. There is evidence of historical mining of these coal seams under the site, dating from before 1740's up to 1980's. A number of mine entries (shafts, adits, pits) have been identified at the site.

Sometimes the mine entries shown on mine abandonment plans vary slightly in their location between different plans, despite being the same mine entry. This is not surprising given the survey techniques available at the time the plans were drawn. Due to these variations a single pit may appear in four different locations on four different plans. On inspection it can be deduced that a few of the Coal Authority pits are in fact different locations of the same pit. Therefore the total number of mine entries on the site is likely to be less than the 21 stated in the Coal Authority report.

For further details of the mineral stability, reference should be made to IKM's Geo-environmental Baseline Summary report (15105-REP-003) in the Environmental Statement for New Brunstane.

CONTAMINATION CONSTRAINTS

Contaminated Land

The site has largely been agricultural land, but site uses have included railway lines and mining. It is possible some form of contamination is present. Any made ground, associated with mining or railways, may contain waste products and chemical contaminants. A review of historical maps and memoirs indicates that there were no mine head works, processing plants or stockpiles located on the site. It is therefore anticipated that works (and therefore made ground) were likely restricted to the construction of isolated shafts or other minor works. In addition, minor depressions appear to have been infilled and it is possible that localised areas of contamination may be associated with the fill material.

Other potentially contaminative historical land uses in the wider area include refuse tips, electrical sub-stations, fuel stations and vehicle repair facilities.

Consultations

Consultations with the Local Authority (CEC) Contaminated Land Officer and SEPA found that they were not aware of any specific issues relating to contamination at the site, however highlighted the railway land as being potentially contaminative. CEC had no records of derelict underground or above ground storage tanks, and there were no records of any private water supplies on or near the site. Additionally there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking-Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed development.

Conceptual Site Model (CSM)

A CSM has been developed based on the current development proposals and the findings of the IKM Geo-environmental Baseline Summary report. The results of the desk study, walkover surveys and existing intrusive investigations undertaken to date have not identified any significant sources of soil or groundwater contamination on the site. However, it is considered possible that some made ground/localised contamination may be present on the site associated with the construction of railway lines, and areas of worked ground including those associated with historic mining and quarrying activities.

These areas have not yet been fully investigated. Such localised contamination could potentially include metals, inorganic contaminants such as sulphates, nitrates and ammonium, organic compounds including fuel hydrocarbons, polyaromatic hydrocarbons and polychlorinated biphenyls. In addition, asbestos containing materials may be associated with made ground across the site.

The key potential receptors identified as part of the CSM are people (construction workers and future site users), the water environment (and any associated ecological receptors), construction materials and vegetation.

Further Work

It is proposed that intrusive environmental, geotechnical and mineral-stability investigations will be carried out prior to the commencement of construction at the site. The scope of investigation will be agreed in advance in consultation with the local authority and other regulatory bodies, including SEPA and The Coal Authority.

Further details are provided in the IKM Geo-environmental Baseline Summary report (15105-REP-003) in the Environmental Statement for New Brunstane.

UTILITIES CONSTRAINTS

There are a number of existing buried and overhead utilities within or close to the boundaries of the site. These include the following:

Scottish Power

Approximately parallel to the ECML on the northeast side is a 33kV overhead distribution line. Three steel towers within the site, approximately 22m in height, support the conductor lines.

Recent discussion with Scottish Power Energy Networks (SPEN) has identified that these towers and associated conductors (overhead distribution lines) are to be removed. The demolition programme is not yet known, but indications to date suggest removal during 2016/2017. For the purposes of the masterplan, these towers and associated conductors have been removed.

New underground cables to replace the 33kV distribution line are located parallel to the embankment to the south of the site. One line of underground cable is positioned at the base of the northern slope of the embankment and another line of underground cable is positioned towards the top of the embankment.

Ongoing consultation with Scottish Power Energy Networks (SPEN) has established that a wayleave width up to **2.5m** would be applied to the 33kV underground cable. A new main access road from Newcraighall Road and a new secondary access road from the Newcraighall North development to the south of the site are proposed which would cross above these cables. Cable ducting and suitable protection would therefore be required in order to fully protect the cables from future vehicle loading.

A diversion to the NCR–1 cycle path is proposed, as shown on the masterplan, which would follow the same line as the 33kV underground cable located at the base of the northern slope of the embankment. If this diverted cycle path were to conflict with the underground cable, cable ducting and suitable protection may be required or alternatively a re–alignment of the cable to suit.

A 275kV transmission line is located close to the southern site boundary, running parallel with the existing cycle path, which splits the Brunstane and Newcraighall North development sites.

Following recent discussions and a site visit with Scottish Power, minimum horizontal and vertical clearances to the conductor lines were calculated based on information provided within Scottish Power technical guidance for overhead lines. Finished ground levels for the proposed access roads are not known at this stage however these will be established during the detailed design stage with consideration to minimum clearances required to the overhead lines.

Ongoing consultation with Scottish Power Energy Networks (SPEN) will be carried out to ensure all standards are met and guidelines followed as the development progresses.

Scottish Water

A 450mm diameter combined surface and foul water sewer, owned and operated by Scottish Water, is shown to enter the site on the southern boundary, continuing along the southern and eastern site boundaries, with a combined sewer overflow discharge into the Magdalene Burn. A series of manholes are present along the length of the combined sewer. Where it enters the site, the top of the pipe appears to be approximately 4.62m below ground level (bgl). Along the eastern boundary, the depth to the top of the pipe, is shown to shallow from south to north from approximately 5.6m bgl to 1.1m bgl.

FLOODING AND DRAINAGE

Flooding

A flood risk assessment has been undertaken by Kaya Consulting Ltd. A summary of their findings is presented below.

The site is not considered to lie within the 200 year floodplain of the watercourse. The Brunstane Burn passes under a railway culvert to the north of the site. Significant blockage of this culvert is unlikely; however, no built development is recommended below the emergency spill level of the railway.

An access road is proposed to cross the Brunstane Burn to the north of the site where the burn at present sits in a valley. The crossing will need to be designed to pass the 200 year flow with required freeboard. The Magdalene Burn flows through the south eastern corner of the site within a culvert. A CCTV survey of the burn has been undertaken for this study and used to develop a mathematical model of the culverted watercourse. Modelling indicates that the site does not lie within the 200 year floodplain of the burn. The site is not considered to be at significant risk from surface water generated outside the site.

The site is not considered to be at significant risk from Scottish Water sewers passing through the site, but these sewers and flow pathways for water surcharging from the sewers should be taken into account in the site design.

There should be no construction on top of any of the culverts within the site. Appropriate wayleaves as discussed in the Utilities section, should be discussed and agreed with the owners of the assets.

It should be noted the risk of flooding can be reduced but not totally eliminated, given the potential for events exceeding design conditions and the inherent uncertainty associated with estimating hydrological parameters for any given site.

Drainage

For the proposed development, the means of draining the surface water from the developed site will be carefully considered to ensure that site surface water closely reflects the behaviour of the existing site run–off and flow pathways.

It is intended that all post development surface water will be drained using a combination of traditional piped methods and sustainable drainage systems (SUDS). Once collected and treated, this will flow into the existing nearby watercourses at an allowed discharge rate. Flow in excess of the discharge rate will be attenuated within the SUDS such as attenuation ponds and basins.

It may also be possible that some of the development surface water can be discharged to the existing Scottish Water combined sewer network. However, this will be subject to the existing capacity and any upgrades required, which will be determined as part of a Drainage Impact Assessment.

As part of this, areas of the site have been designated as attenuation areas. The design of the SUDS proposals have also been developed in consultation with the project ecologists in order to maximise the secondary benefits of SUDS features for wildlife and biodiversity.

The final SUDS strategy and design will be dependent on the finalised impermeable area, ground investigation and consultations with Scottish Water, SEPA and The City of Edinburgh Council.

It is proposed that all foul water discharge from the development shall be discharged to the existing foul sewerage network. The requirement for any upgrades to the existing network capacity will be determined as part of a Drainage Impact Assessment. Although a formal Drainage Impact Assessment has not yet been undertaken for the development, early consultation with Scottish Water has indicated that upgrading works may be limited to increasing the capacity of an existing combined sewer. This is currently being reviewed by Scottish Water as part of their Pre–Development Enquiry procedure, and will subsequently be assessed as part of a Drainage Impact Assessment, to be informed by the emerging masterplan.

The proposed sewerage system will connect to the existing network at locations agreed with Scottish Water. The network will be designed such that all connections are gravity fed and pumped sewerage is not required.

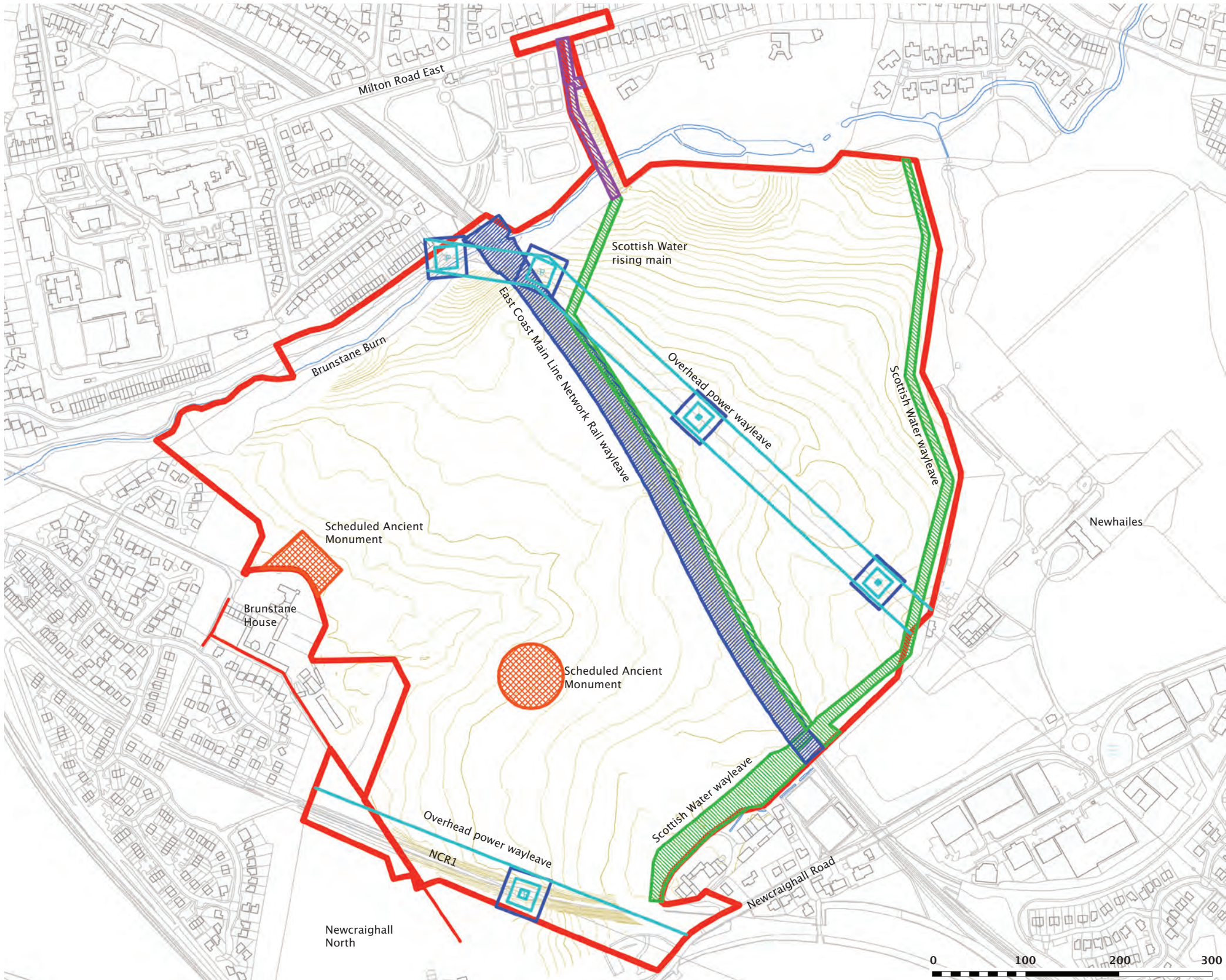
ECML CONSTRAINTS

Network Rail owned land adjacent to the East Coast electrified mainline bisects the site. Network Rail has advised that a wayleave of 3m be considered from the Network Rail boundary fence. This has therefore been taken into account when developing the masterplan.

As part of the development works, a new bridge across the East Coast Main Line is proposed. The new bridge will accommodate a two lane carriageway, a footpath and cycle path. Network Rail internal clearance has been granted for the proposed new bridge.

During the detailed design of the proposed overbridge, all vertical clearances will also be taken into account to ensure that minimum clearances required are achieved to the underside of the bridge deck and the overhead electrified lines.

Ongoing consultation with Network Rail will be carried out to ensure all standards are met and guidelines followed as the development progresses.



TECHNICAL CONSTRAINTS DIAGRAM

© Crown Copyright. All rights reserved. Licence no. 100017780

NOISE AND VIBRATION CONSTRAINTS

As part of the Environmental Impact Assessment for New Brunstane, a noise and vibration impact assessment was completed. The findings of the assessment are summarised below. The main sources of noise were anticipated to be road and rail traffic, along with construction noise.

Two scenarios were considered for the purposes of the noise impact assessment, these were:

- › Short term, interim scenario: development phases located to the north of the site commence in the absence of the railway overbridge to link the west and east sides of the site;
- › Long-term, operational scenario: the entire proposed development is completed along with all the required infrastructure, including the new railway overbridge.

Rail Traffic Noise

Consideration was given to the potential impact from existing rail traffic on new Noise Sensitive Receptors (NSRs) associated with the proposed development. For all new NSRs considered, the magnitude of impact, for all daytime and night-time passenger trains travelling past the site, was considered to be either negligible or of no impact.

Predicted noise levels for night-time freight traffic showed a minor adverse impact predicted for NSRs located at the west and south-east sections of the proposed development. The assessment assumed that four trains would pass this site during the night. When freight traffic passes were reduced to three the noise values predicted fell below the threshold, leading to a negligible impact.

The magnitude of impact of daytime passenger and freight train services are considered to be negligible for the proposed new school.

All maximum noise values attributed to rail traffic noise were found to exceed the relevant, external night-time guideline value. For new NSRs located to the west of the site, a moderate adverse long term impact was identified; whilst a major adverse impact was identified for new NSRs located in the east and south east sections.

Rail Traffic Vibration

In consideration of the highest readings recorded to date, it is deemed likely that the rail traffic passing the site will have no adverse impact on new residential and commercial structures within the proposed development.

Vibration records collected to date suggest that the likelihood of complaints from residents as a result of vibration from trains will be low.

Road Traffic Noise

Both short term (interim) and long term (operational) effects from the proposed development on road traffic noise were assessed in line with the predictive methods detailed in CRTN, using road traffic flow data.

For all of the scenarios considered during the assessment, the impacts were all deemed to be negligible.

Construction and Construction Site Traffic Noise

In terms of the potential acoustic impact of the construction process, a short term, temporary, significant, adverse impact has been identified as likely to be imparted on residential receptors situated on Milton Road East, during construction of the new crossing over the Brunstane Burn. Whilst this is recognised as a potential impact, it can be readily mitigated via the implementation of a Construction Environment Management Plan (CEMP).

Inherent Scheme Mitigation

Within the current scheme design, consideration has been given to the following mitigation measures which would aid noise mitigation:

- › Construction of a 1.8m close board noise barrier to separate the proposed development from the rail corridor situated 3m from the Network Rail boundary and running parallel with the rail corridor. This could lead to a nominal 5dB reduction in noise levels for ground floor façades of receptor buildings within the proposed development; and

- › Internal room layouts for residential and commercial units within the proposed development to orientate more sensitive habitable spaces away from the railway corridor.

Proposed Additional Mitigation

In the absence of confirmation of the number of freight trains that currently pass the site during night time periods, further noise survey work would help to determine freight traffic numbers during a night time period at the façades of the nearest new NSRs within the proposed development. This could be undertaken as part of the detailed design.

If double glazed window units are used in all NSR buildings within the proposed development then no further mitigation would be required for the facades of new NSR buildings facing the railway corridor, since a nominal attenuation factor of 25dB (attributable to standard, closed double glazed window units) can be applied to the predicted night-time rail noise values. This will ensure internal noise levels are significantly below WHO Guideline thresholds for promoting restorative sleep conditions.

The noise impact assessment highlighted a potential for moderate to major impacts to be imparted on new NSRs within the proposed development, due to maximum noise values attributable to rail traffic noise. However, further acoustic attenuation can be afforded through the use of double glazing and alternative ventilation solutions, such as trickle ventilators, which can lead to sound attenuation. Further measurements could be undertaken during the detailed design process to inform mitigation design.

The noise impact assessment has highlighted the potential for adverse effects to be imparted on both existing and new NSRs for construction site activities where these are to be undertaken in proximity to the receptors. Appropriate mitigation measures should be implemented to ensure that any adverse effects are reduced to satisfactory levels. These mitigation measures can be included as part of the wider CEMP. Full details are provided within the Environmental Statement.

AIR QUALITY

An assessment of the potential impacts of the proposed development on air quality has been undertaken as part of the Environmental Impact Assessment. This work was undertaken by Ricardo Energy and Environment Ltd, and the findings are summarised below.

The air quality impact assessment has three main aims:

- › Quantify the existing and future baseline air quality at the proposed development; and establish whether locating residential properties within the proposed development could introduce new human exposure to locations where there is poor air quality.
- › Describe and assess the potential air quality impacts associated with the increased road traffic attributable to the proposed development.
- › Assess the risk of fine particulate/dust emissions during the construction phases of the proposed development to human health or amenity, and propose best practice dust mitigation measures where required.

The assessment concluded that the proposed development would have an insignificant effect on air quality at all locations, with the exception of a small number of residential properties at Musselburgh High Street, where the impact would be moderate. This reflects the advantageous location and the mitigation built in to the proposed development.

The forecast moderate impact in Musselburgh High Street is due to the elevated baseline levels of PM10 levels at this location, with the proposed development resulting in a marginal increase of less than 1% which would not be measureable.

Full details are provided within the Environmental Statement.

ECOLOGY

The site comprises mostly arable land and is surrounded on three sides by existing built development. The site is bisected by the East Coast Main Line (ECML) railway line in a cutting running from north-west to south-east.

Designated Sites

The Firth of Forth SSSI, SPA and Ramsar site is located approximately 400m north of the development site. The qualifying interests of the designated site include wintering bird populations of European importance which may occasionally forage within the development site. Although the arable fields will no longer be available for foraging birds from the SPA, the development site is considered to form only a small proportion of their foraging range and therefore only a minor impact is envisaged.

The site is bounded to the north by the Brunstane Burn which is a Local Biodiversity Site (LBS), designated for the burn and associated scrub, woodland and grassland habitats. The water quality of the Brunstane Burn appears to be good and an appropriate management/treatment sequence will be established throughout the site to ensure that source control and sufficient treatment is carried out.

The disused railway on the southern boundary of the site forms a section of the wider Disused Railway Network LBS. There will be unavoidable habitat loss from the two designated sites. Habitat creation will aim to link valuable habitats around Brunstane Burn and the disused railway and will comprise native species of local provenance including those listed on the Edinburgh LBAP.

Plants and Habitats

The site consists of two large intensively managed arable fields bounded by areas of semi-improved neutral grassland, scrub, tall ruderal vegetation, individual trees, broad-leaved woodland and the Brunstane Burn. The areas of woodland, particularly those mature areas associated with the Brunstane Burn and Newhailes Policies, are considered to provide important ecosystem services.

Habitat creation will be informed by the Edinburgh LBAP and the habitats already present on the site. The six SuDS ponds offer opportunities to create a series of semi-natural wetland habitats on the site, where there are currently none. Water will be permanently present in the SuDS ponds up to 500 – 600mm in depth, and will make a contribution to the Freshwater and Wetland Habitat Action Plan in the Edinburgh LBAP, as well as providing valuable foraging habitat for bats which have their own Species Action Plan within the LBAP.

Giant Hogweed and Japanese Knotweed are known to be present within the site and a scheme for the eradication of these species will be submitted to and approved by CEC prior to the commencement of the development

Birds

Barn owls nest in the northern wall of the walled garden at Newhailes House adjacent to the site and were present at the nest site during the surveys. Barn owls could be disturbed during the construction works and foraging habitat around the field margins would be permanently lost. As mitigation for the loss of barn owl foraging habitat is severely constrained by the lack of suitable undeveloped habitat within the home range, it is considered that offsetting provides the best opportunity to provide successful mitigation. The site also supports an assemblage of breeding farmland birds and is likely to provide some value for wintering birds although this is likely to be heavily influenced by the type of crop which is grown each year. Nesting birds could be disturbed during the construction works and there would be a loss of foraging and nesting habitat as a result of the development. Vegetation clearance will be timed to avoid the nesting bird season and mitigation in the form of replacement planting and bird boxes will reduce the impact of the development. All habitat creation will aim to use native species of local provenance.

Bats

Soprano and common pipistrelle bats are known to forage around Newhailes, and soprano pipistrelle roost sites have been confirmed within Newhailes. A number of trees and structures were identified within the development site, and adjacent to the site boundary which have the potential to be used by roosting bats. Any confirmed bat roosts will be avoided if possible or a replacement roost would be provided.

Bats may be disturbed during construction works and foraging corridors may be fragmented. Bat transect surveys are currently being undertaken but it is expected that the site will be of low value to foraging and commuting bats. However, new planting will mitigate for the loss of foraging habitat and will aim to form links between adjacent areas of bat foraging habitat. There is potential for the development to have a positive impact on the local bat population.

Otter

Otters are known to be present within the Brunstane Burn and high levels of otter activity were identified during the surveys, although no otter resting sites were identified. Otters could be subject to higher levels of disturbance during the construction and operational phases of the development, although it is expected that they would become habituated. The creation of SUDS ponds above the Brunstane Burn corridor could result in a new seasonal food resource for the otter population, which could have a positive impact.

A combination of otter proof fencing on both sides of the access road together with the provision of mammal ledges on each wall of the proposed new crossing over the Brunstane Burn will be used to reduce the likelihood of any otters being killed as a result of road traffic related mortality.

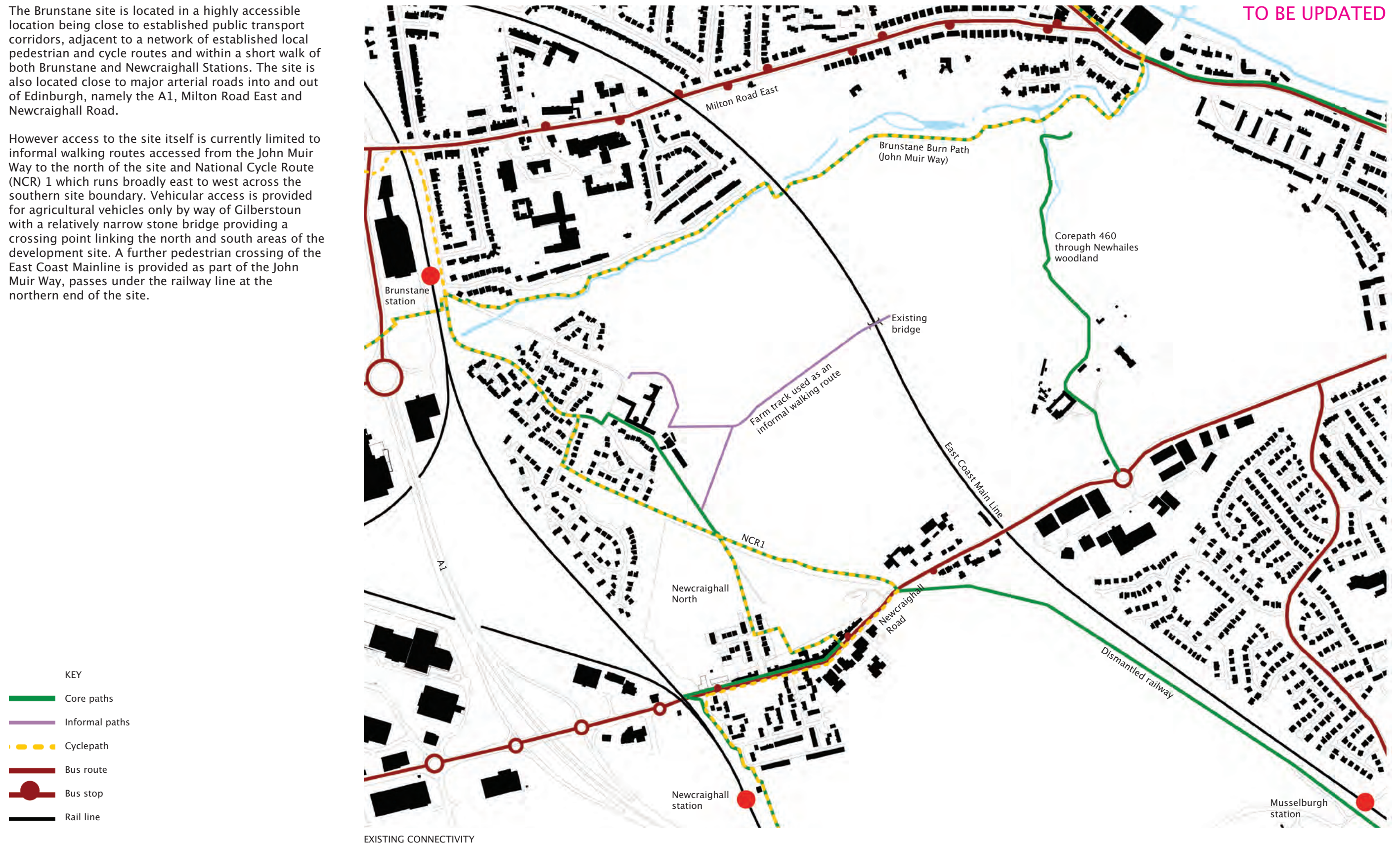
Other Species

Great crested newts, reptiles and badgers are considered to be absent from the site.

2.3 existing movement and connectivity

The Brunstane site is located in a highly accessible location being close to established public transport corridors, adjacent to a network of established local pedestrian and cycle routes and within a short walk of both Brunstane and Newcraighall Stations. The site is also located close to major arterial roads into and out of Edinburgh, namely the A1, Milton Road East and Newcraighall Road.

However access to the site itself is currently limited to informal walking routes accessed from the John Muir Way to the north of the site and National Cycle Route (NCR) 1 which runs broadly east to west across the southern site boundary. Vehicular access is provided for agricultural vehicles only by way of Gilbertstoun with a relatively narrow stone bridge providing a crossing point linking the north and south areas of the development site. A further pedestrian crossing of the East Coast Mainline is provided as part of the John Muir Way, passes under the railway line at the northern end of the site.



2.4 landscape context

The site comprises nearly flat, undeveloped land which slopes from a high point on the western edge of the site at about 35m AOD gently down to the north east – towards the sea and, along the northern boundary, more steeply towards the incised valley of the Brunstane Burn. The low point of the site, at the northeast corner, is at about 15m AOD.

Landscape Character Assessment

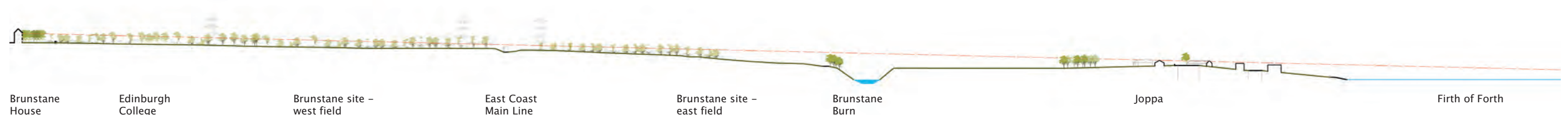
The Edinburgh Landscape Character Assessment (LCA) defined the site as “Settled Farmland” landscape character type and described it as:

“...a largely flat to very gently undulating area of farmland lying between Brunstane, Newhailes in East Lothian and Newcraighall. The area comprises large arable fields with some outgrown hedgerows and trees. The area is crossed by the north east coast railway to North Berwick and a disused railway line, which is now an access route, runs alongside the current track. Although adjacent to the policies of Newhailes, the influence of these does not extend into this landscape character area. The urban edge of Brunstane and Newcraighall is prominent in this landscape and comprises dense, modern housing estates. The landscape is also crossed by power lines which have a strong visual influence and there is noise intrusion from the A6095. The development of Queen Margaret College is taking place just over the local authority boundary in East Lothian.”

The landscape assessment notes that this is an “open area of arable farmland with large scale fields, influenced by urban features such as pylons and built development”, and “This low lying arable farmland is typical of the landscape of the City of Edinburgh with a high degree of fragmentation by road and railway lines, areas of new development and the close proximity of the urban edge typical of urban fringe landscapes.”



VIEW TOWARDS THE SEA AND NORTH BERWICK LAW FROM THE NORTH EDGE OF THE EASTERN FIELD



SITE SECTION: BRUNSTANE HOUSE TO THE SEA

Site Features

The western half of the site is generally flat, very slightly undulating and overall sloping gently from the southwest towards the northeast. There is a drop of approximately 5m over the 400m or so width of the site. The eastern half of the site continues the gentle fall, becoming slightly steeper and more pronounced towards the northern edge as the ground drops down to the Brunstane Burn. The overall level change is a little over 10m in 600m.

Almost the entire site is under intensive arable cultivation. The exceptions are an area of worked or potentially infilled ground adjacent to Wanton Walls, which is covered in rough grass with a small amount of scrub, and the steep bank down to the Brunstane Burn to the west of the railway line which is covered in well-established woodland. The policy woodlands of Newhailes House border and add maturity to the eastern edge of the site.

There is no formal public access to the site and very limited signs of informal use. The signed path which cuts diagonally across the Newcraighall North site (to the south of the proposed site) terminates at the National Cycle Route (NCR) 1 path along the old railway embankment. The line of the path carries on into the proposed development and through to the corner of Brunstane House. It is not signed and is substantially overgrown.

There is evidence on the ground that it is lightly used up to the edge of the Brunstane House grounds, and users then follow the edge of the field up to the rough track that leads to the railway bridge. There is no sign of any informal path beyond the bridge. National Trust for Scotland (NTS) have advised that dog-walkers use the field close to the boundary with Newhailes.



VIEW SOUTH WEST ALONG FARM TRACK TOWARDS GILBERSTOUN AND BRUNSTANE HOUSE



EXISTING BRIDGE OVER RAILWAY LINE



EAST COAST MAIN LINE IN A CUTTING



NCR1 ALONG SOUTH WESTERN BOUNDARY OF SITE

Site Periphery

The northern edge of the site is formed by the valley of the Brunstane Burn. West of the railway the site extends to the burn itself whilst to the east it is marked by the line of the Brunstane Burn walkway which runs close to the top of the valley side.

The Brunstane Burn is the main watercourse, along the northern edge of the site, quite steeply incised west of the railway, opening out slightly (although still very distinctly cut in) east of the railway. A small stream out-with the site boundary runs into the Brunstane Burn from the south, through the woodland policies of Newhailes House immediately east of the site. The only significant slopes on the site are at the edges of the Brunstane Burn valley. The riparian character of the burn is especially evident along the site boundary, where the banks are steep and heavily vegetated aside from the north east corner where there is a small area of flatter land forming public open space at the edge of Newhailes.

The cemetery lies to the north of the burn on a slightly higher elevation which affords some views across the site.

The eastern edge of the site abuts the designed landscape of Newhailes House with its mature policy woodland. Along most of this edge the boundary is marked by the stone wall enclosing the grounds of the house.

Immediately west of the ECML, the southern boundary of the site is formed by the boundary hedge of the Niddrie Bowling Club, and then west of that it is open and indistinct against the steading of Wanton Walls (which appears to be derelict).



BRIDGE OVER BRUNSTANE BURN



UNDERPASS OF BRUNSTANE BURN PATH BENEATH THE RAILWAY LINE



PORTOBELLO CEMETERY GLIMPSED ACROSS THE ECML



LOCATION OF PROPOSED ACCESS ACROSS THE BRUNSTANE BURN

The southern boundary is enclosed by a disused railway embankment, now part of NCR 1, partly scrub covered and with a number of mature trees. A stone wall, generally in good condition, along the toe of the railway embankment would appear to be the actual field boundary. A high voltage overhead power line follows the line of the railway embankment.

Gilberstoun lies immediately west of the site, and consists of late 20th century brick-built semi-detached houses with private gardens in a typical cul-de-sac and courtyard layout.

The core of the former mining village of Newcraighall to the south western edge of the site is a row of traditional, single-storey harled miners' cottages along Newcraighall Road, with a block of two-storey stone houses at the centre, and a church and school opposite. The south side of the village was developed as social housing in the 1970's.



REAR GARDEN BOUNDARIES TO HOUSING AT GILBERSTOUN PLACE AND NORTHERN BOUNDARY TO BRUNSTANE BURN



UNDEFINED BOUNDARY TO GILBERSTOUN



NEWCRAIGHALL VILLAGE, LINEAR FORMS DEFINE THE STREET



FRAGMENTED EDGE TO THE SOUTHERN BOUNDARY WITH NEWCRAIGHALL ROAD AND WANTON WALLS



MINIMAL THRESHOLD SPACES PROVIDE PRIVACY

Newhailes

Newhailes House, a neo-Palladian villa, dates back to the 17th century. It retains most of its original grounds, which are a designated GDL. The house stands centrally and slightly elevated within its designed landscape, placed to command extensive views out to the north-east, over lawns and parkland, to the Firth of Forth.



NEWHAILES



VIEW TOWARDS ARTHUR'S SEAT FROM NEWHAILES OVER EXISTING WOODLAND

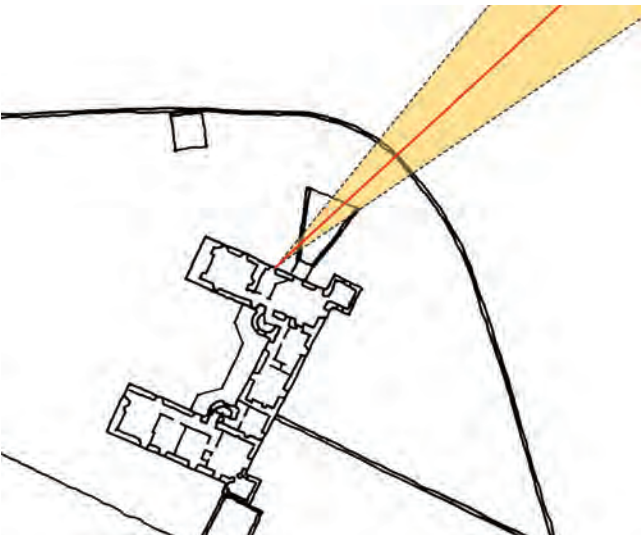


WOODED BOUNDARY TO NEWHAILES

Brunstane House

On the western edge and overlooking the site lies Brunstane House, a 16th century listed building. Although the majority of the associated policies which covered the surrounding area (including parts of the site) have since gone, the house retains its stature. To the south of the main house beyond its walls lies a group of semi-derelict steadings.

In the C17th, the Duke of Lauderdale had his great chamber placed on the first floor of Brunstane House to provide views to the north-east towards the Firth of Forth and Fife. The broad views of the sea are only partially appreciable today; modern development, including the East Coast Main Line railway, pylons and the housing developments at Joppa and further north obscure a large portion of the view.



PLAN OF BRUNSTANE HOUSE INDICATING LINE VIEW FROM LAUDERDALE'S 'GREAT CHAMBER'



VIEW TO SEA FROM BRUNSTANE HOUSE



NORTH EAST FACADE OF BRUNSTANE HOUSE



VIEW TOWARDS SOUTH-EAST FACADE OF BRUNSTANE HOUSE

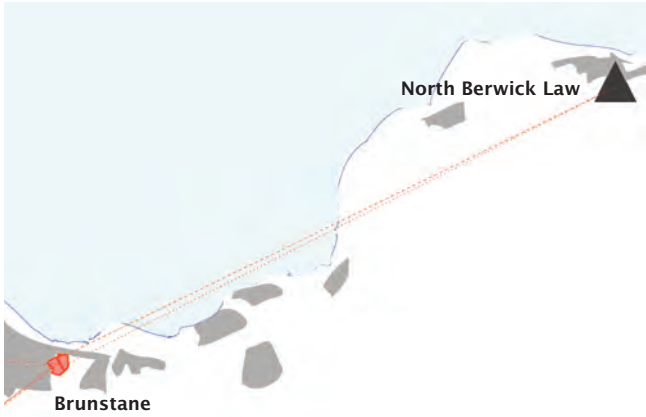


VIEW TO SEA, PHOTOGRAPH TAKEN AT GROUND LEVEL FROM OUTSIDE THE WALLED GARDEN OF BRUNSTANE HOUSE

Retained Views

At the outset of the project the views from the site to the wider landscape were recorded and the coordinates and bearing of each view plotted. These include views to:

- › The Firth of Forth
- › Authur's Seat
- › North Berwick Law
- › Pentland Hills



VIEW TOWARDS NORTH BERWICK LAW ABOVE A LOW-POINT IN THE WOODLAND AT NEWHAILES



LOOKING TOWARDS ARTHUR'S SEAT FROM THE SITE, BRUNSTANE HOUSE IS ON THE FAR LEFT AND EDINBURGH COLLEGE ON THE RIGHT



VIEW TOWARDS PENTLAND HILLS FROM SITE

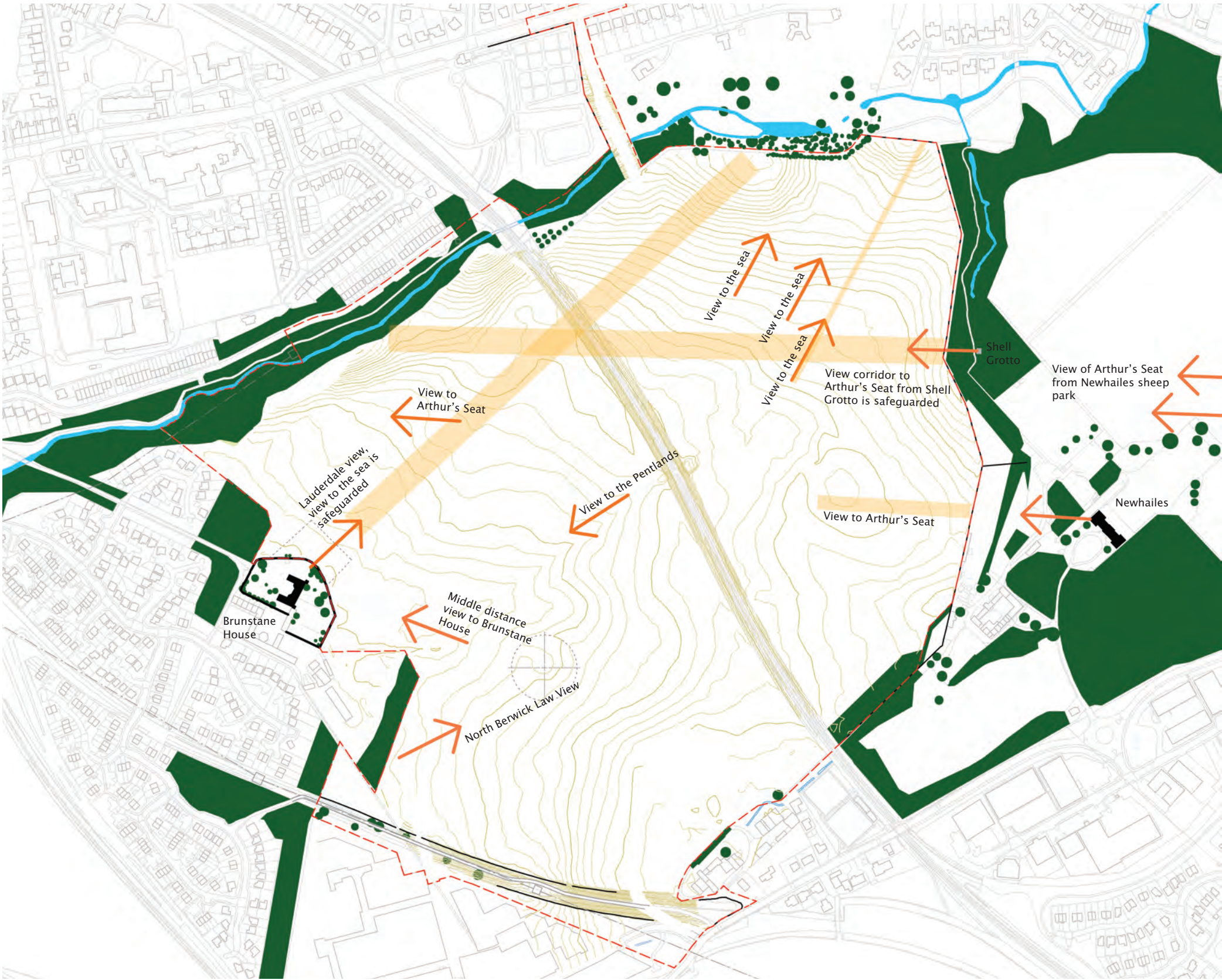
RESPONSE TO LANDSCAPE

The geometry of streets and spaces within the proposed masterplan is derived from the matrix formed by the key views. The diagram opposite highlights these views.

Through discussion with stakeholders, including Historic Environment Scotland, the National Trust for Scotland, Scottish Natural Heritage and CEC, critical views from Newhailes and Brunstane House were identified as important to the setting of the listed buildings. These include:

- > The view to Arthur's Seat from the Newhailes
- > The view to Arthur's Seat from the Shell Grotto
- > The View of the sea from Brunstane House

The middle distance view from beside the historic tree belt towards the south east elevation of Brunstane house was also seen as important by Historic Environment Scotland.



URBAN DESIGN PRINCIPLES: RETAINED VIEWS

2.5 historical analysis

Introduction

Historic maps detailing elements such as gardens, woodland planting, watercourses and movement patterns reveal characteristics which have informed the design for New Brunstane.

This section highlights these elements and describes how the masterplan responds.

Listed Buildings and Designed Landscape

There are two designated historic environment assets within the red line boundary, Brunstane moated settlement (Scheduled Monument SM10580) and Brunstane enclosure (Scheduled Monument SM4112). Both will be preserved in situ, within areas of parkland within the proposed masterplan, and will not be directly impacted by the proposed development.

Other non-designated historic environment assets within the red line boundary include: buried remains of the former gardens of Brunstane House, the former locations of buildings, a former quarry and well, and a series of coal mining related features.

The desk-based assessment and geophysical survey of the proposed development area indicate that there is little potential for the discovery of additional dense or complex buried archaeological remains.

The proposed scheme of mitigation will offset all predicted direct impacts on non-designated historic environment assets within the redline boundary.

Within the surrounding area there are a series of designated assets for which it was considered possible that the proposed masterplan might have an indirect impact upon their setting, notably Brunstane enclosure (Scheduled Monument SM4112), Brunstane moated site (Scheduled Monument SM10580), Brunstane House (Category A Listed Building LB28034), Newhailes Inventory Garden and Designed Landscape, including Newhailes House (Category A Listed Building LB10911) and Newhailes Shell Grotto (Category B Listed Building LB10915).

The proposed masterplan retains a series of key views from and to these assets, including views from Brunstane House towards the Firth of Forth, views from Brunstane enclosure towards Brunstane House, and views from Newhailes House, and Newhailes Shell Grotto towards Arthur's Seat. An impact of moderate significance upon the setting of Brunstane House (Category A Listed Building LB28034) is predicted as a result of the proposed development. No other significant impacts on the setting of historic environment assets have been predicted.

No cumulative impacts resulting from the proposed masterplan in combination with other developments have been identified.

Full details are provided within the Environmental Statement.



MAP OF THE COUNTY OF EDINBURGH, GREENWOOD, FOWLER & SHARP 1828, Reproduced by permission of the National Library of Scotland.

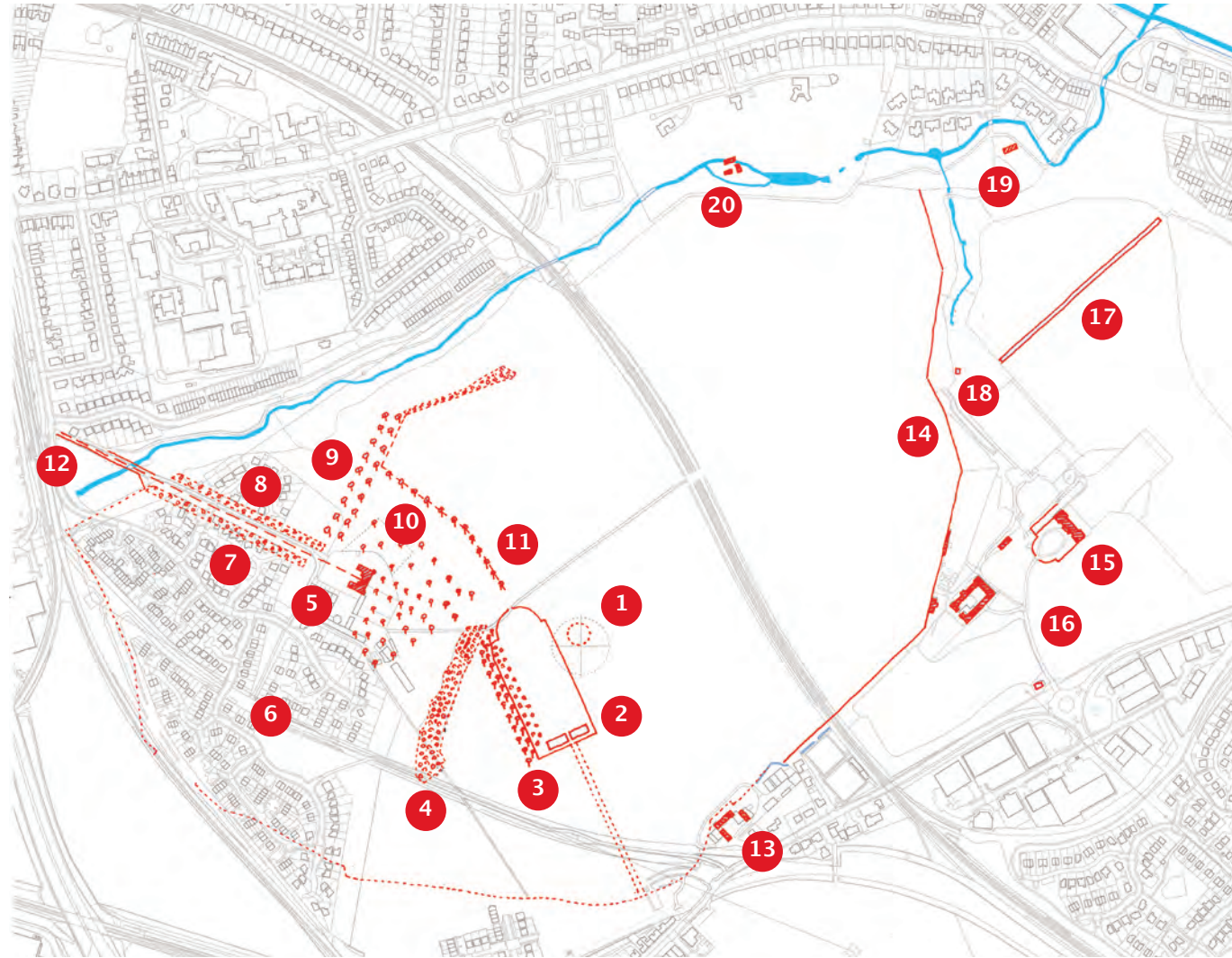
- KEY
- 1 Walled garden is shown distinct and separated from garden adjacent to Brunstane House
 - 2 Boundary of more formal garden adjacent to Brunstane House
 - 3 Avenue leading north-east
 - 4 Tree belt
 - 5 Route now dissected by railway
 - 6 Dotted boundary to East Lothian and route to mill
 - 7 'Lady's Walk'



OS MAP DATING FROM 1854 FIRST EDITION, EDINBURGHSHIRE, SHEET 3.6" TO 1 MILE. Reproduced by permission of the National Library of Scotland.

KEY

- 1 The extent of the historic tree belt and position of the walled garden indicate that views to the south-east elevation of Brunstane house were designed to be middle-distance.
- 2 Partial remains of the walled garden
- 3 Treeline boundary remains on OS mapping until 1914
- 4 Avenue leading north-east to the burnside path
- 5 Route dissected by railway
- 6 This area was exploited as a semi-industrial landscape
- 7 'Lady's Walk'



HISTORIC ELEMENTS OVERLAYED ON CONTEMPORARY OS MAPPING

KEY

- 1 High point of the SM 4112 Brunstane Enclosure relates to a dotted circle (red) indicated on historic mapping.
- 2 The walled garden location and orientation is mapped from 1854 OS mapping
- 3 The south western edge of the walled garden is an area filled with trees that may have been fruit trees
- 4 This treebelt is the sole surviving element of the former designed landscape around Brunstane House and is outwith the site boundary
- 5 Brunstane House
- 6 Gilberstoun housing is built on the historic location of Brunstane House's kitchen gardens and tree lined western avenue
- 7 Axial approach to Brunstane House was loosely aligned on a view to Arthur's Seat, now obscured by modern development to the north west
- 8 Gilberstoun Place is built on north part of the historic formal landscape
- 9 Double tree-lined avenue leading north-east towards the burn
- 10 Brunstane moated settlement SM 10580
- 11 The tree-lined that defined the apparent boundary of more formal landscape, planted with trees, adjacent to Brunstane House is recorded on mapping from 1764 through to 1914
- 12 Brunstane Bridge
- 13 Wanton Walls
- 14 The Newhailes' wall steps down to become a low wall north of this location
- 15 Newhailes House
- 16 Newhailes Inventory Garden and Design Landscape
- 17 'Lady's Walk' is a raised walkway designed to define compartments of pasture and also provide a walking route separate from the animals, with elevated views
- 18 Newhailes Shell Grotto
- 19 Brunstane Mill was historically located beyond the boundary of the site and is now Brunstane Mill Park
- 20 Barracks

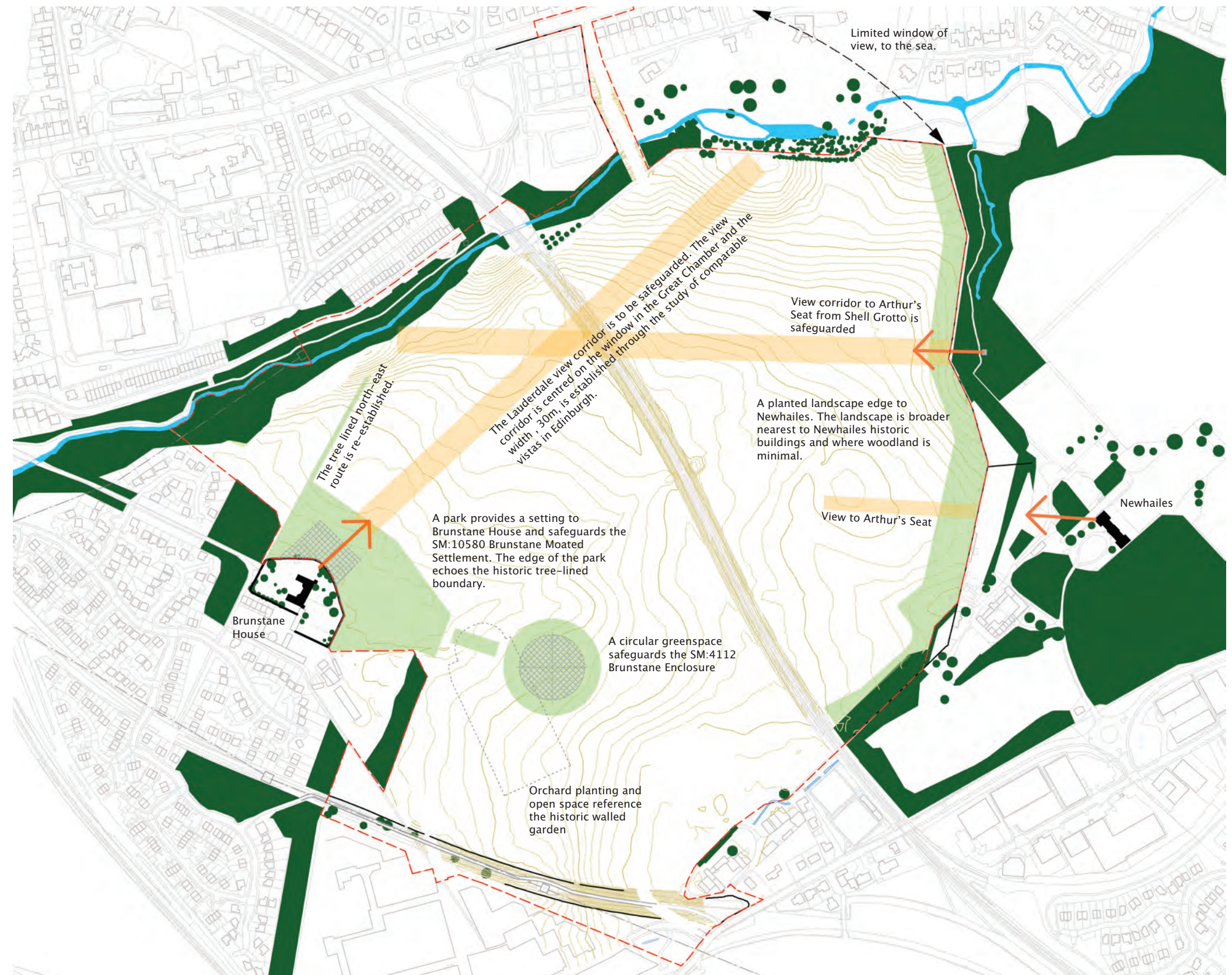
RESPONSE TO HISTORIC CONTEXT

The response to Brunstane House includes:

- › The general principle of making views aligned to Arthur's Seat echo the intention of the design of the axial approach to Brunstane House which was loosely aligned to Arthur's Seat.
- › The historic tree lined north-east route is re-established.
- › The tree-line boundary that defined the formal landscape to the east of Brunstane House, informs the shape and edge of the Brunstane Park. The park provides a setting to Brunstane House and safeguards SM:10580.
- › A greenspace safeguards SM:4112.
- › The walled garden informs the geometry of the street pattern. Orchard planting and open space as a reference to the western boundary wall of the garden that was planted with fruit trees.
- › Views towards the south-east elevation would have been middle-distance only and obstructed by the historic tree belt and individual tree planted around the house. Provision for a walking route connecting the greenspaces and a framed view to Brunstane house is proposed.

The response to Newhailes includes:

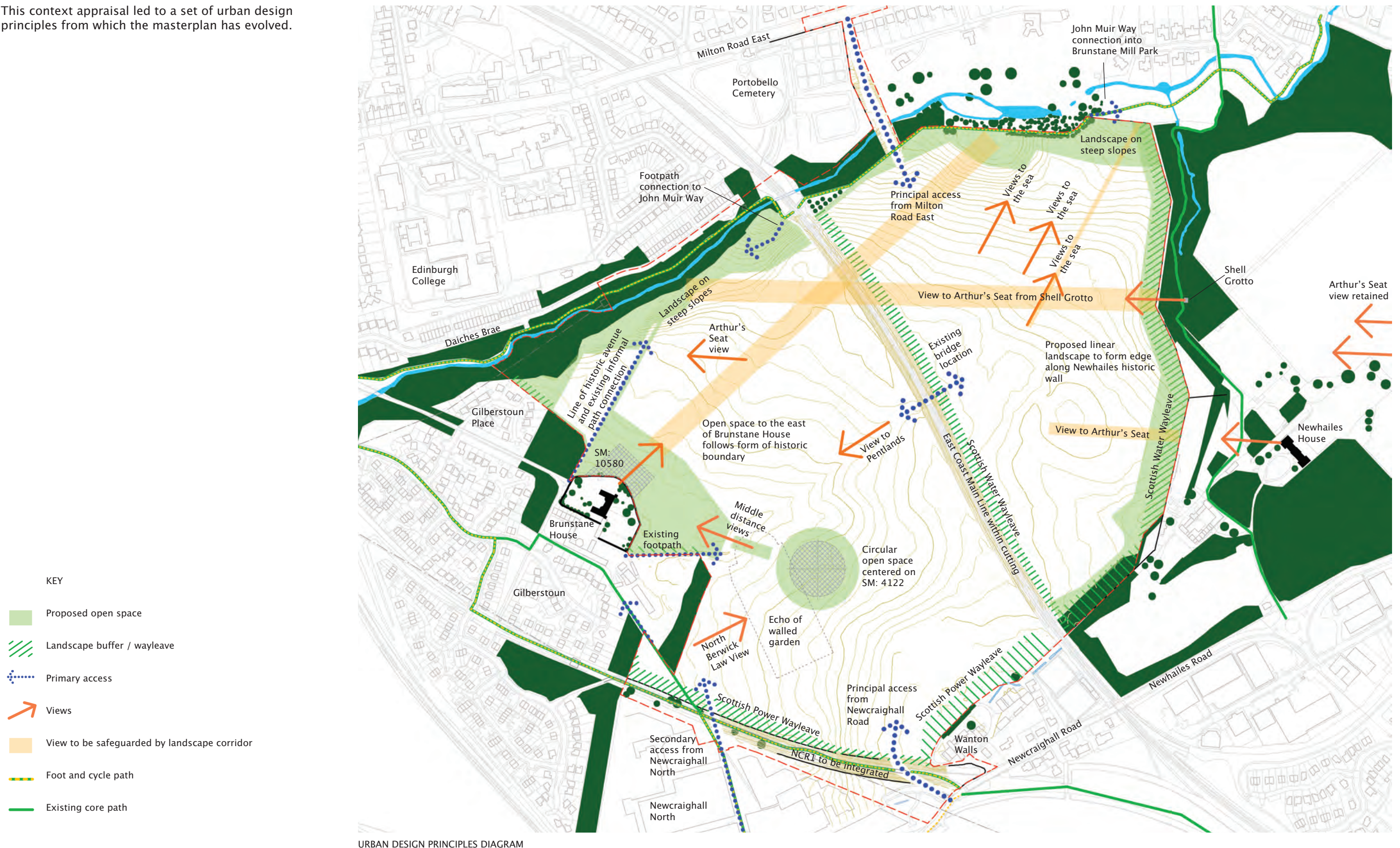
- › A parkland view corridor from the Shell Grotto at Newhailes towards Arthur's Seat.
- › A parkland view corridor from Newhailes House towards Arthur's Seat.
- › A planted landscape edge along the historic wall to Newhailes. Planting is limited by Scottish Water wayleave.
- › 'Lady's Walk' and ha-has within the Newhailes estate inspire the use of ha-has to define landscape boundaries along swales and a raised perimeter to the circumference of Brunstane Green.



URBAN DESIGN PRINCIPLES: RESPONSE TO HISTORIC CONTEXT

2.6 urban design principles

This context appraisal led to a set of urban design principles from which the masterplan has evolved.



URBAN DESIGN PRINCIPLES DIAGRAM

Landscape and Visual Amenity

An assessment of the potential impacts of the proposed development on visual amenity and on the landscape and townscape resource has been undertaken as part of the Environmental Impact Assessment. This work was undertaken by WSP|Parsons Brinkerhoff, and the findings are summarised below.

The assessment covers two distinct but closely related areas: landscape character and visual amenity. Landscape (and townscape) effects are direct physical changes to the landscape caused by the development or indirect changes to landscape character and how the landscape is perceived following the development. Landscape impact assessment considers these effects both in terms of the individual components of the landscape and on the structure, coherence and character of the landscape as a whole.

Visual effects are changes in the composition and character of views available in the area affected by the proposed development. Visual impact assessment considers the response of the people who experience these effects, who may be living or working in the area, enjoying recreational activities or simply passing through. The assessment considers the overall consequence of the effects on the visual amenity – the pleasantness of the view or outlook – that the people affected enjoy.

The site masterplan was been developed through a careful process of site analysis and consultation and is designed to respond to the landscape and historic character of the site, its constraints and opportunities. As such, landscape and visual mitigation has been built in to the design and this chapter considered the residual effects.

The key aspects of the masterplan which can be considered as landscape and visual mitigation commitments, as well as historic environment mitigation in some instances, are as follows:

- › Generally two-storey development to minimise wider visibility, rising to three along key streets and a maximum of four storey to provide appropriate urban enclosure to the larger open spaces;
- › A major tree-framed open space around Brunstane House to create an appropriate new setting for the listed building;
- › A broad street / linear green space providing a view corridor from Brunstane House to the sea;
- › A substantial landscape buffer to the east to separate the proposed development from the designed landscape of Newhailes House, with the added benefit of providing new pedestrian linkages and a major wildlife corridor;
- › Lower density, maximum two-storey development abutting the Newhailes landscape buffer, carefully designed to provide low-rise interesting frontages to the open space and to minimise any visual effects on views from the GDL;
- › A broad street / linear green space providing a view corridor from the shell grotto in Newhailes to Arthur's Seat, along with a minor view corridor from Newhailes House;
- › The creation of a broad landscape and open space buffer along the south side of the Brunstane Burn east and west of the new entrance road, to provide a quality landscape edge to the valley and new recreational connections to the John Muir Way;
- › A landscape buffer along NCR 1 to provide a degree of 'breathing space' to this recreational route;

- › Development abutting or adjacent public paths and open spaces around the site normally to be arranged with main frontages facing towards said path or open space;
- › A green link along one side of the ECML railway, a combination of allotments and park that would also act as a wildlife corridor;
- › Local open space distributed within the development, designed to be passively supervised by the arrangement of overlooking houses.
- › Streets designed in response to existing topography (to minimise cut and fill);
- › Streets designed to maximise views out to the wider landscape e.g. Berwick Law and the sea;
- › Boundaries designed to respond to specific character of site.

New Brunstane is a landlocked pocket of fields and visibility of the proposed development beyond the area immediately abutting the site would be very restricted.

The assessment concluded that there would be a remarkably small number of visual impacts given the scale of the proposed development. Significant adverse visual effects would be limited to:

- › A narrow strip on the north side of the Brunstane Burn where some 40 houses and a similar number of new flats currently enjoy a rural aspect across the site;
- › Brunstane House;
- › A short section of the Brunstane Burn path, the John Muir Way (about 500 m), and;
- › A short section of the NCR 1 the old railway path along the south edge of the site (about 400 m).

The assessment concluded that the character of the New Brunstane site itself would be fundamentally changed by proposed development but that there would be no adverse effects on any areas of the adjacent townscape. It concluded that significant landscape effects would be limited to a small area of the Brunstane Burn valley east of the East Coast mainline railway.

Importantly, it concluded that there would be no significant adverse effect on the present-day character of the Newhailes House designed landscape. Development would change the setting of Brunstane House, but the retention of a reasonable landscape buffer to the house can be considered to provide an acceptable new setting.

Development of the site would be almost unnoticeable from the main road approaches to the city and briefly glimpsed from the main rail approach. The only real clear view of the site in the context of the city is that from Arthur's Seat.

Full details are provided within the Environmental Statement.

3 strategic masterplan

Intent of the Masterplan

Careful investigation of the local landscape, historic forms and the design opportunities created by the site have uncovered the placemaking potential of New Brunstane. This analysis has informed proposals to create a distinctive new residential neighbourhood for Edinburgh.

This process has established a strategic masterplan proposal providing a unique response to the Brunstane context that is also capable of being adopted by one or more site developers in future. The masterplan demonstrates the potential to apply urban design best practice principles, including a design-led approach to placemaking, that realises Scottish Government and City of Edinburgh Council policy aspirations. New Brunstane has been designed to provide the six qualities of place as set out in Scottish Planning Policy 2014 and Designing Streets 2010: Distinctive, Safe and Pleasant, Welcoming, Adaptable, Resource Efficient, and Easy to Move Around and Beyond.

We have looked at the new public places that will be created, considering how these will be experienced by the people who live in the area now and in future, how to enhance the experience of the landscape for everyone, how to make pleasant and habitable streets and spaces and above all how this might come together to reinforce a sense of local identity.

A series of parks, squares, community gardens and avenues are proposed that frame a spectrum of choreographed views, spaces and routes that respond to what is unique about the local area, the landscape, its history and its future potential. Carefully designed new housing can support the creation of an attractive parkland setting for everyone to enjoy and it can create a lively and active setting for community life, a place where quality of life, health and wellbeing are at the forefront. This is a key objective for New Brunstane.

Scope of this Section

This section demonstrates how the masterplan for New Brunstane builds on analysis and characteristics of the site and the area. It sets out design principles embedding urban design characteristics important for creating an attractive residential environment at New Brunstane.

Design Principles

The Design Principles set out in the following sub-sections record the urban design and other design principles that the masterplan is based on and that any future developers of the site will be expected to adopt. Links to analysis are referenced in each sub-section.

These cover:

- › Landscape Design Principles
- › Strategic Landscape Framework
- › Movement Design Principles
- › Neighbourhood Design Principles
- › Phasing
- › Strategic Masterplan

3.1 landscape design principles

The landscape design principles record qualities of the local landscape to be protected and enhanced. These principles are informed by the context analysis set out in earlier sections. They have been established following consultation with City of Edinburgh Council, Historic Scotland, Scottish Natural Heritage, the Nation Trust for Scotland, and others.

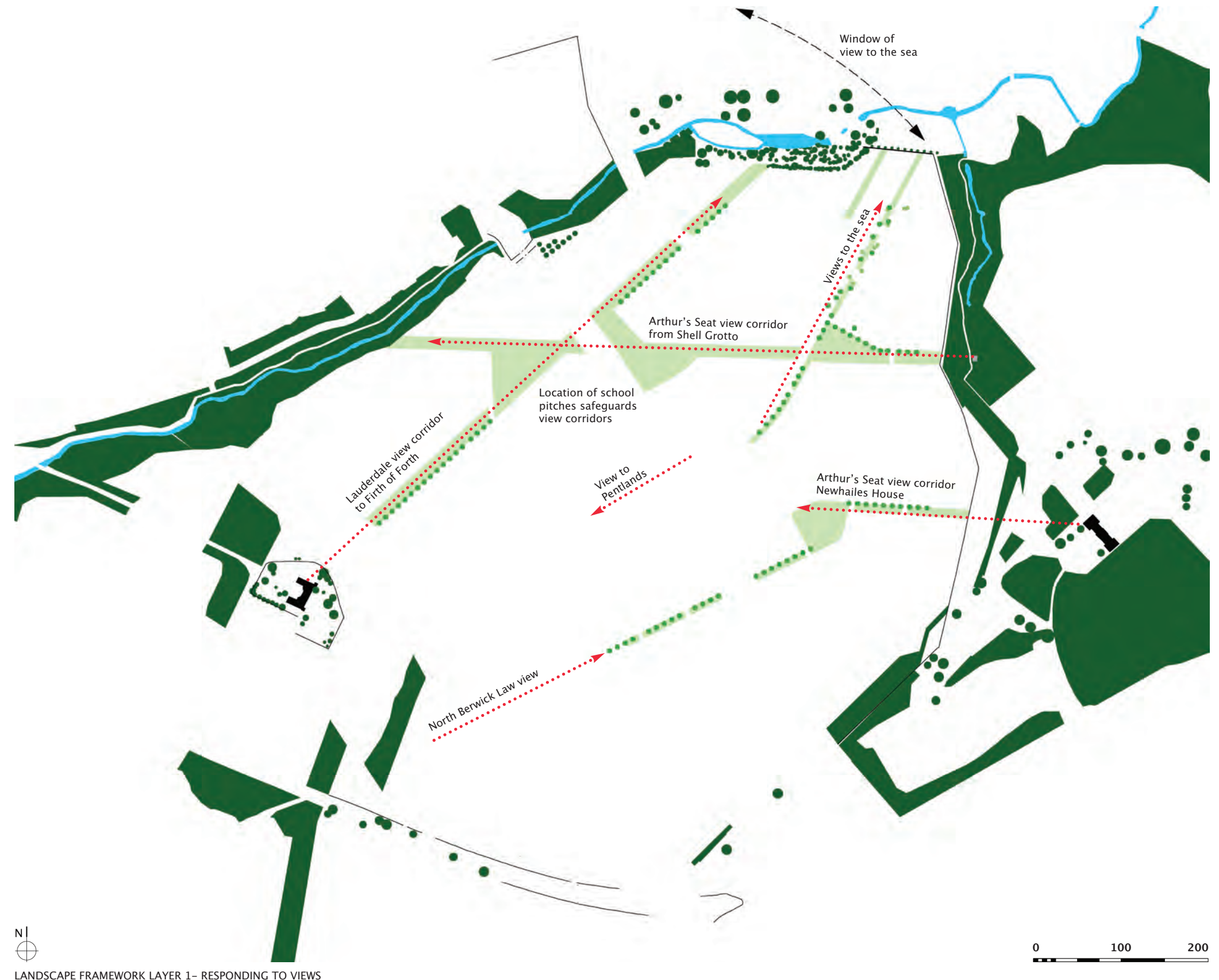
The landscape principles also record important qualities for the design of new parks, open space and structure landscape for the benefit both of new residents and the neighbouring communities of Joppa, Brunstane, Gilberstoun, Newcraighall and Wanton Walls.

A landscape framework plan is included at the end of this sub-section to show how the landscape principles contribute to the creation of a place. Future, more detailed landscape design must build upon these principles.

Views

In response to the views identified on site a series of view corridors are proposed. These include:

- › Lauderdale View – framing the view to the sea from Lauderdale's Great Chamber in Brunstane house.
- › Arthur's Seat View – from the Shell Grotto within Newhailes. Although this view is no longer evident due to the trees within Newhailes, the NTS may in future wish to reinstate this vista. Arthur's Seat can also be seen from the western field.
- › Arthur's Seat View – from Newhailes. Due to the height of the Newhailes boundary wall this view is from first floor and therefore over the top of any development, however, the masterplan proposes a landscape corridor in the foreground along this axis.
- › View to North Berwick Law – from the eastern field North Berwick Law can be seen in a gap in the trees at Newhailes. The masterplan proposes a street aligned to this view.
- › Views to the Pentland Hills.
- › Views to the sea from the eastern field.



Landscape Response to Historic Environment

Brunstane Park

Brunstane Park provides a setting to Brunstane House and preserves the Scheduled Monument (SM no 10580).

The park surrounds the walled garden to the north and east of Brunstane House. Its form traces the plan form of C18th parkland, the eastern edge defined by a tree lined avenue that parallels the landscape boundary as it appears on 1914 mapping. The northern edge is defined by a double line of trees that mirror the northeast southwest avenue that also appear on historic maps.

The HSG 29 Brunstane development principles, as modified by the ELDP examination Reporters, state that the impact on the setting of Brunstane House should be minimised through the appropriate design and layout of housing, including the provision of sufficient open space and landscaping. The detail design of this space will be undertaken at the next stage in conjunction with CEC and Historic Environments Scotland.

South of the park the street follows the alignment of the west wall of the historic walled garden of Brunstane House. The street is framed by orchard planting linked to elements indicated on historic mapping.

Brunstane Green

Brunstane Green, is a soft landscaped space encompassing a Scheduled Monument (SM no. 4112), a crop mark of a circular enclosure. The enclosure is not perceptible on site, except that there is subtle rising of the land towards its centre.

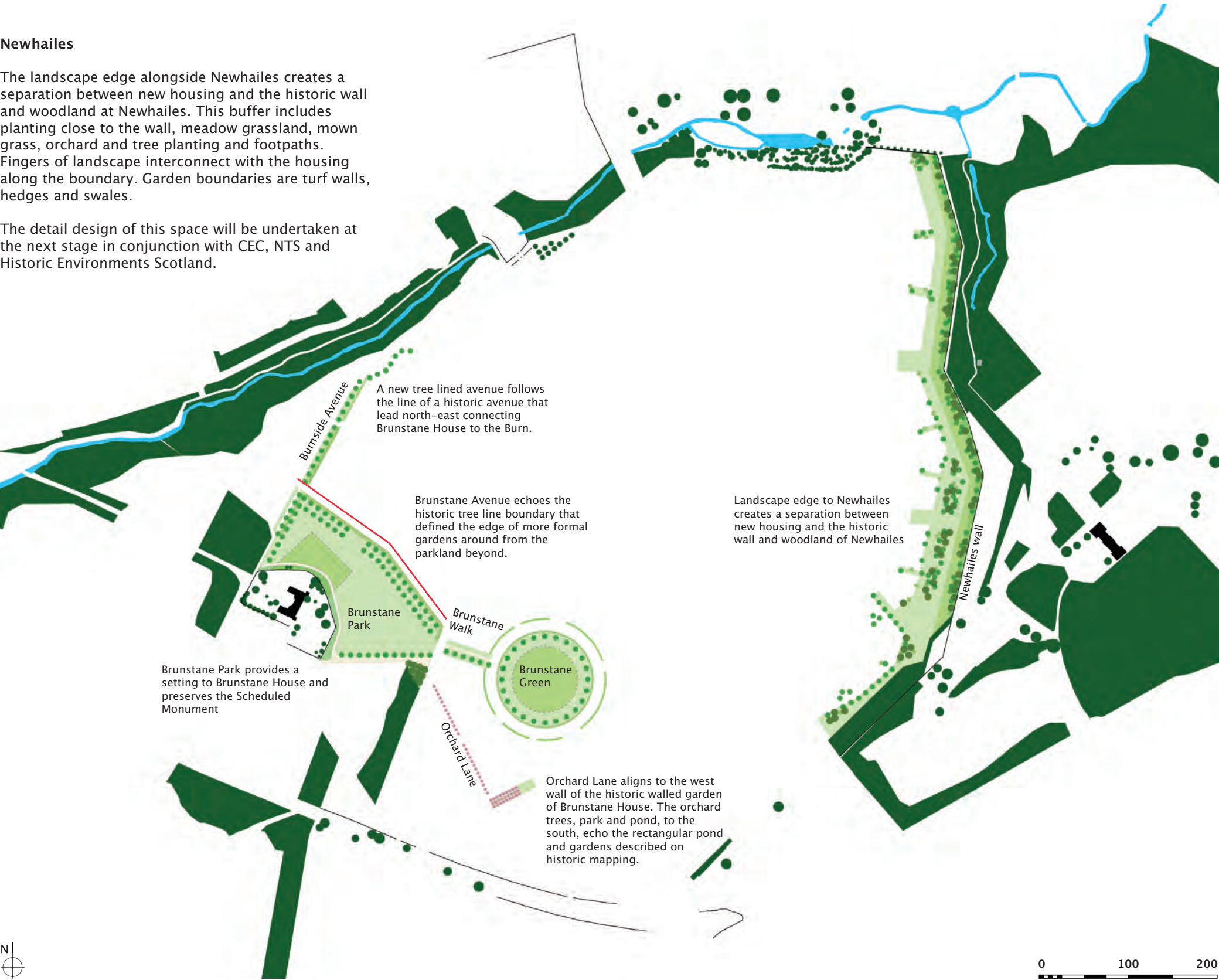
The detail design of this space will be undertaken at the next stage in conjunction with CEC and Historic Environments Scotland.

Brunstane Walk connects the Green with the Park. Adjoining building frontages will frame the view to Brunstane House.

Newhailes

The landscape edge alongside Newhailes creates a separation between new housing and the historic wall and woodland at Newhailes. This buffer includes planting close to the wall, meadow grassland, mown grass, orchard and tree planting and footpaths. Fingers of landscape interconnect with the housing along the boundary. Garden boundaries are turf walls, hedges and swales.

The detail design of this space will be undertaken at the next stage in conjunction with CEC, NTS and Historic Environments Scotland.



LANDSCAPE FRAMEWORK LAYER 2 – RESPONDING TO HISTORIC CONTEXT

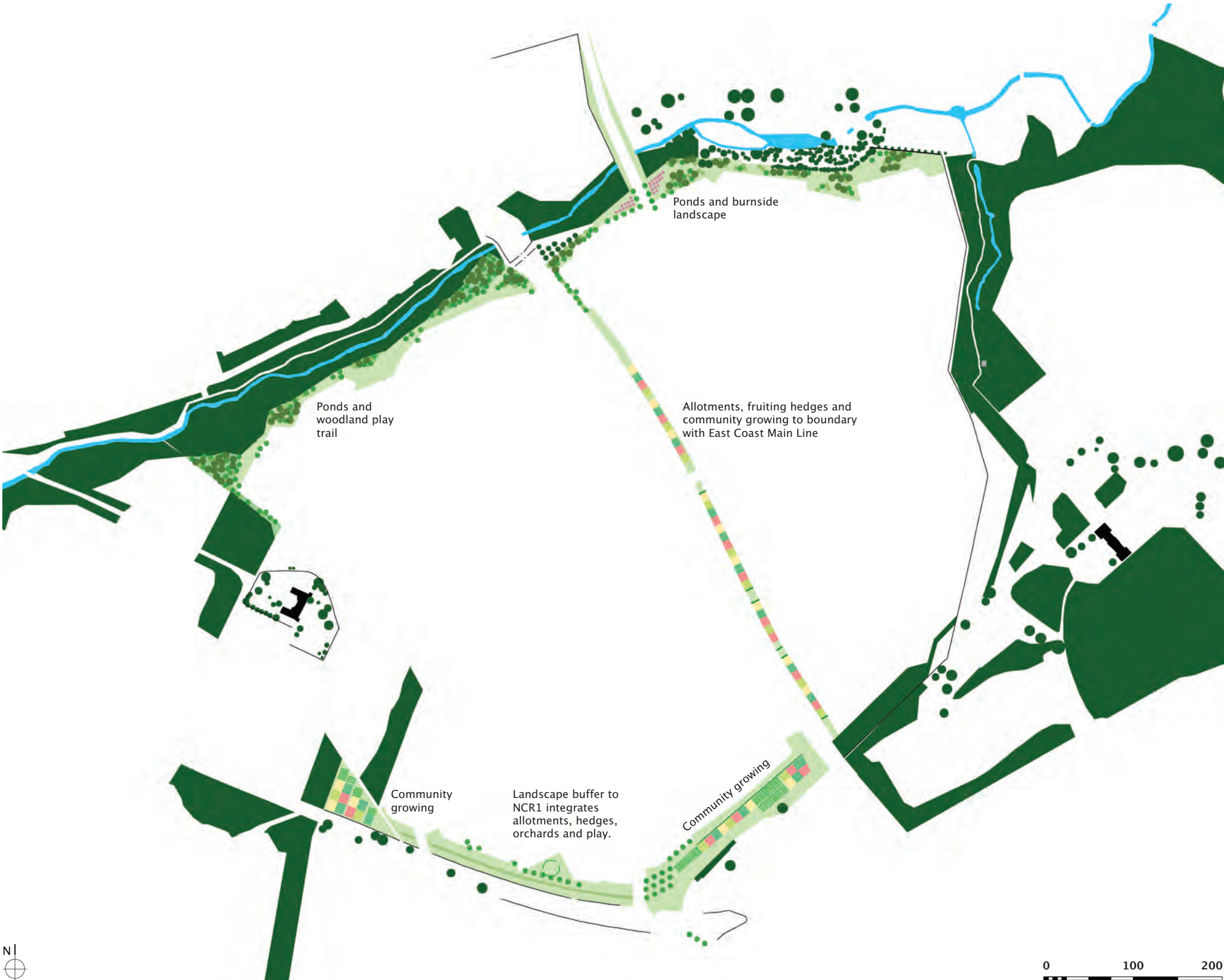
Edge Landscape

A series of proposed edge landscapes create walks, habitat corridors and enhance biodiversity by stitching the new landscape into the existing landscape.

These areas include the burnside edge along the northern boundary, the landscape buffer to Newhailes noted previously, the south-western edge boundary with Newcraighall North and the edge to the north of Wanton Walls.

The linking of footpaths to the wider existing movement network encourages walking, running and cycling. Informal play within the parkland will be incorporated along these routes.

Locations have been identified for community growing including allotments, fruiting hedges and orchards.



LANDSCAPE FRAMEWORK LAYER 3 – RESPONDING TO EDGES AND STITCHING INTO THE EXISTING LANDSCAPE

Water Infrastructure

Working with the existing topography a series of swales and SUDS ponds are integrated into the landscape framework enhancing biodiversity and managing surface water run-off.

Within the landscape, and as a reference to the designed landscape at Newhailes, swales alongside ha-has are proposed to define edges to parkland. Swales alongside turf walls or hedges are also proposed to define the boundary between rear gardens and the landscape.

SUDS ponds are located at the low points to maximise use of natural topography and natural gravity systems.



Play

Proposed within the 'Linear Park' is a play area classed as 'very good' to CEC standards. This is located centrally within the new neighbourhood. It is also readily accessible for the wider community via the foot and cycle path network from the John Muir Way.

A kick about area is included within this linear park. See section 4 for more detail.

Three other play areas are proposed, the first adjacent to the NCR1 will be delivered as part of the first phase.

To the north, an informal play trail is proposed integrated with the woodland and SUDS pond adjacent to the burn.

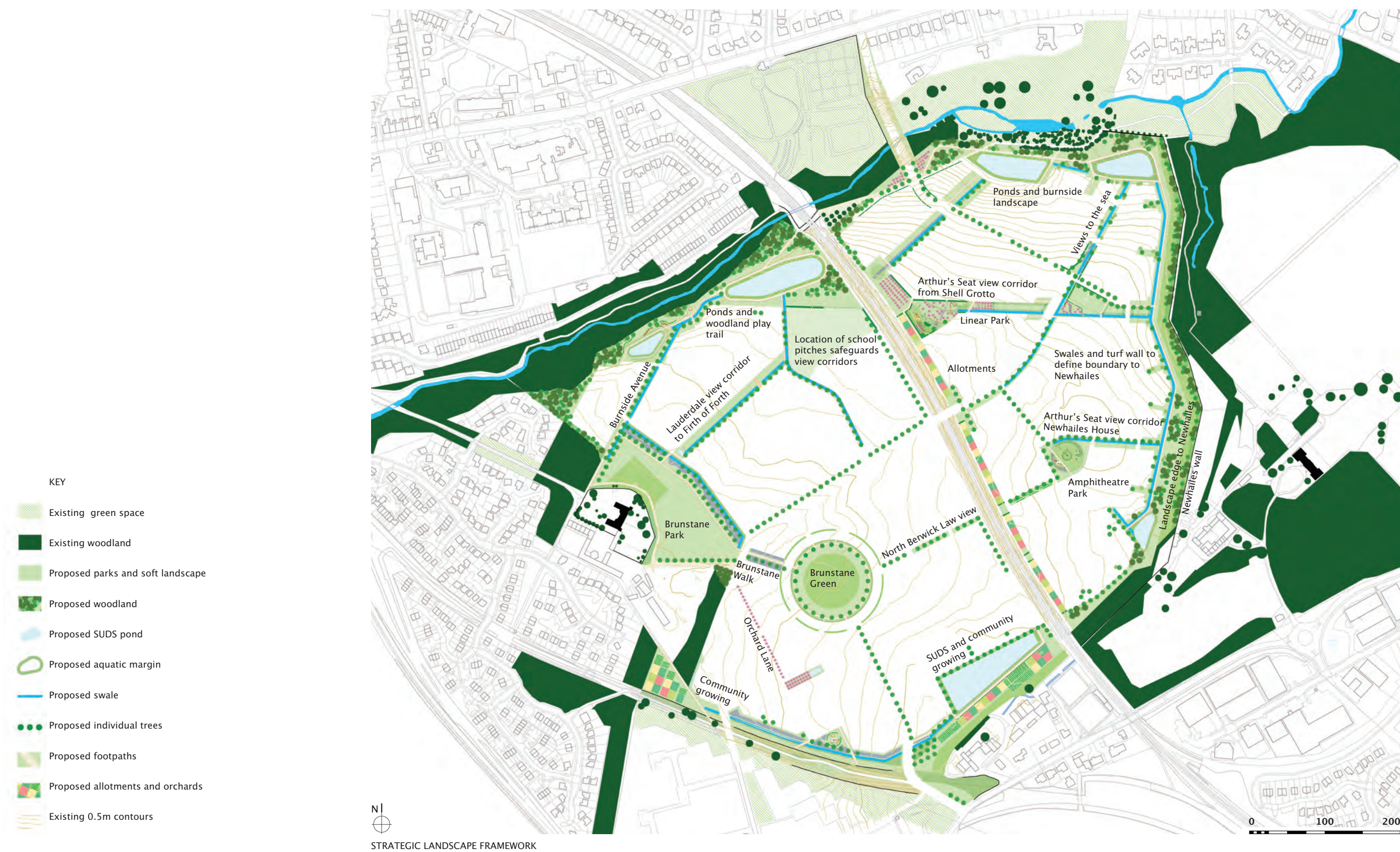
To the south of the eastern field a further informal play area is proposed around a landscaped amphitheatre.



- KEY
- Linear Park: 'very good' play value (to CEC standards)
 - Local play

LANDSCAPE FRAMEWORK LAYER 5 – PLAY

3.2 landscape framework



3.3 movement design principles

Approach

The movement design principles are based upon the 'Place Before Movement' approach set out in Designing Streets 2010.

The movement design principles record key characteristics of the network of paths, cycle routes and streets that provide for connectivity between the site and adjoining areas. The principles are inter dependent on neighbourhood design principles set out in section 3.4.

The movement design principles establish the potential for public spaces and experiences that meet the Place Standard, with the potential to enhance health and wellbeing through the creation of a safe and attractive environment that encourages a healthy active lifestyles and access to high quality green space.

The proposed network is designed to be easily accessed from the existing movement network. In accordance with both local and national transport policy guidance, the masterplan access strategy provides for access by all modes of transport but with an emphasis on more sustainable modes such as walking, cycling and public transport.

TRAVEL HIERARCHY:

WALKING



CYCLING



PUBLIC TRANSPORT



PRIVATE CARS



The movement design principles are to:

- › Create a high quality residential environment based upon best practice urban design principles.
- › Integrate the site into the adjoining area whilst providing new opportunities for access into and across via a series of high quality walking and cycling routes, and parkland spaces.
- › Provide for sustainable development through encouraging walking and cycling, access to public transport and local facilities whilst minimising car use.

Access and Permeability

The proposed development will significantly enhance the level of access to the site, which will significantly increase the permeability of the wider area for pedestrians, cyclists, public transport as well as vehicular traffic. The site layout has been developed to be highly permeable throughout with a network of proposed streets and footways/cycleways traversing the site.

A number of key routes have been identified within the site which will afford new opportunities to link **Milton Road East** (and the **John Muir Way**) to the **NCR 1**, the proposed development site with **Brunstane Station** and provide a permeable network of streets between key nodes within the site creating a genuine opportunity for sustainable trips within the site to and from the proposed Primary School, open spaces and local centre. The site is well within walking distance of Brunstane Station and Newcraighall station, as shown on the plan below, and NCR 1 provides an opportunity for traffic free cycling from the site to Edinburgh City Centre as well as potential routes east towards **Queen Margaret University** and **Musselburgh Station**.

New vehicular access points to the site are to be created to the north onto Milton Road East and to the south, linking into the access roads serving Newcraighall North, currently under construction. The provision of accesses to the north and south of the site start to open up the opportunity for public transport routes to be diverted through the site and early stage discussions suggest there is potential to divert existing services and create new service to serve the site. The main spine road will allow the opportunity for new double decker services to operate which are currently prevented from operating along Newcraighall Road by the railway bridge south of the Newcraighall P&R Access.

The key piece of infrastructure to deliver the link through the site will be the provision of a new railway bridge. This will be provided close to the existing bridge crossing and will be designed to accommodate pedestrian, cycle, public transport and vehicular traffic. It will provide access from both sides of the site to key services and facilities.

Importantly the provision of the bridge and spine road links allow any traffic generated by the development to access the surrounding road network at the most appropriate location for its ultimate destination minimising its impacts on the surrounding road network. For example residents travelling north from the southern side of the site (or indeed the Newcraighall North site) towards Portobello or Leith are able to do so directly rather than initially travelling east or west along Newcraighall Road and then via either Edinburgh Road or the A1 to reach their ultimate destination creating an opportunity to reduce travel distances and journey times for all traffic, including potential public transport services.



Integrating walking and cycling

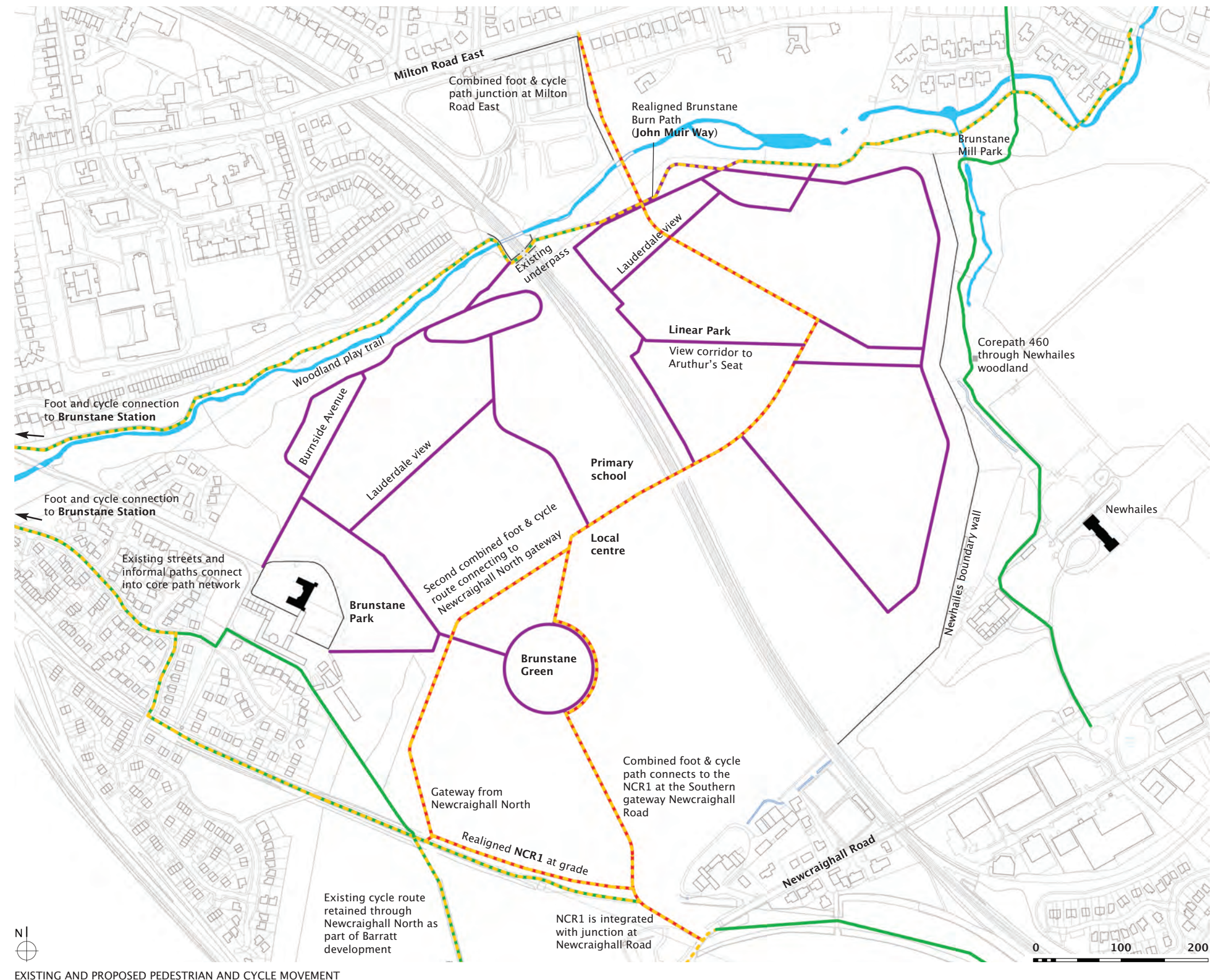
There is an established network of paths and cycle ways in the vicinity, and the masterplan has sought to improve these by providing attractive and convenient links from north to south, creating opportunities for further connection between Milton Road East and Newcraighall. The development will also extend the existing recreational walking and cycling routes through the site and importantly provide direct and convenient links from the site to the surrounding public transport infrastructure.

It has been incumbent on the emerging infrastructure for the site to ensure that existing cycle ways and walkways, such as the John Muir Way, are retained, as well as creating opportunities to improve the local cycle network. The presence of a designated NCR1 cycle route along the southern boundary and others in the wider area have influence the approach to providing non-motorised access, by linking routes to and through the site within the existing network.

The proposed movement framework aims to:

- › Knit the new neighbourhood into the existing foot and cycle network.
- › Enhance the existing movement network by creating new walking and cycling routes across the site, particularly in a north-south direction.
- › Connect NCR1 with the John Muir Way.
- › Encourage walking and cycling through the creation of safe and pleasant routes.
- › Create a permeable and easily navigable network of routes.
- › Link key nodes along desire lines.
- › Provide safe routes to school, play areas and local facilities.

- KEY
- Proposed footpath
 - Proposed 3m combined foot and cycle path
 - Existing foot and cycle path
 - Existing core path



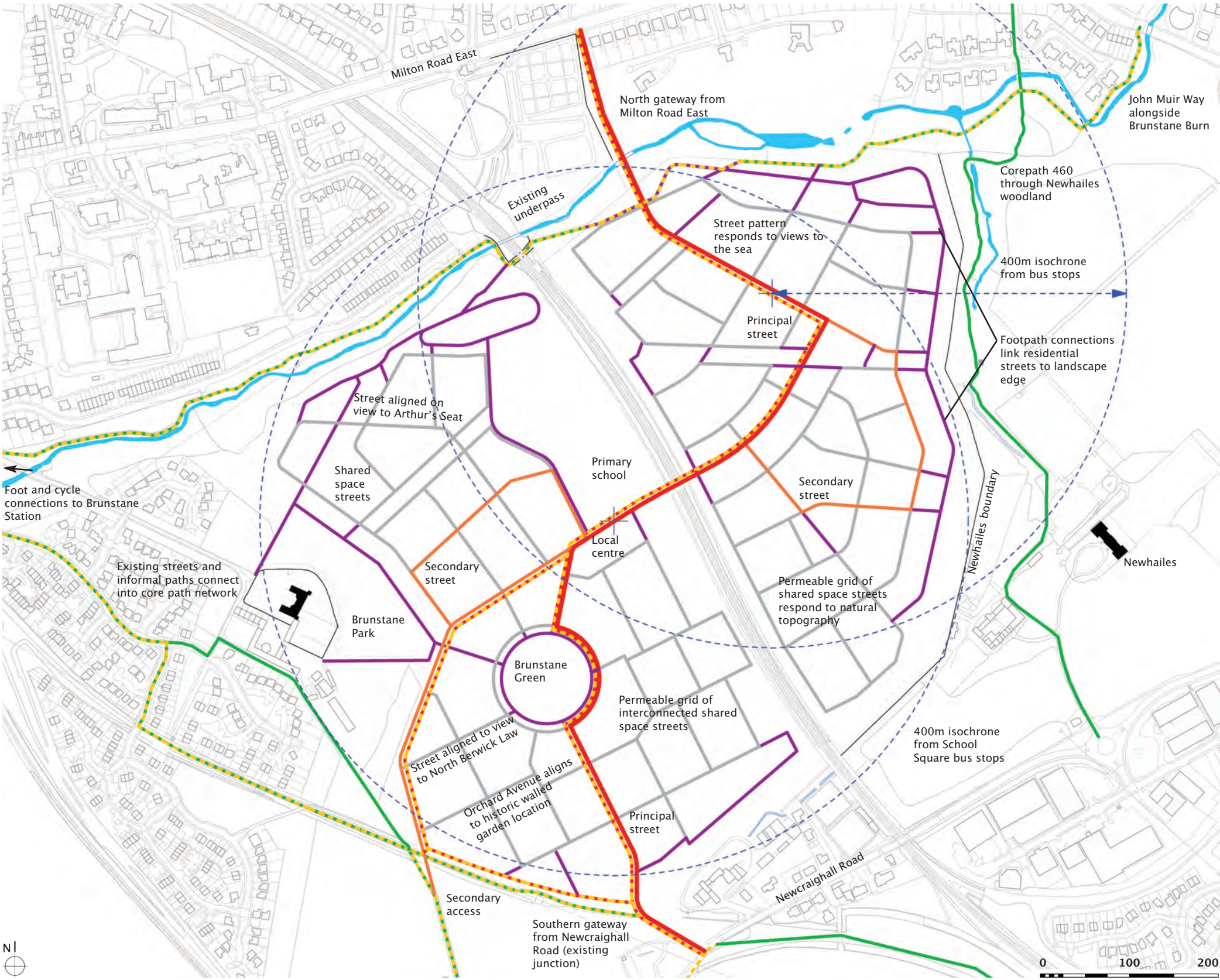
Street Types

The street layout is based on a clear hierarchy that is required to compliment adjoining uses and activities and the needs of different user groups. Within New Brunstane the priority has been to create a place that is easy to get around, is safe and welcoming. This is dependent on the characteristics of adjoining buildings and public spaces. as set out in the neighbourhood design principles and the ‘place’ section of this report.

The masterplan supports the creation of vibrant and pleasant streets. It seeks to draw from best practice in Scandinavia, Holland and Germany where pedestrian oriented layouts are widely used. The intention is to create spaces for people alongside a strong sense of place and local identity.

A diverse mix of street types is intended to bring a richness of character and increase legibility. Street types range from ‘urban’ in the higher density areas to informal more rural streets in lower density areas beside Brunstane Burn and towards Newhailes. Each of these street types are illustrated in section 4 of this report.

- KEY
- Proposed principal street
- Proposed secondary street
- Proposed shared space
- Proposed footpath
- Proposed 3m combined foot and cycle path
- Existing foot and cycle path
- Existing core path



PROPOSED STRATEGIC MOVEMENT FRAMEWORK

3.4 neighbourhood design principles

The neighbourhood design principles are based upon urban design principles first set out by DETR in By Design, then subsequently established in Scotland via Designing Places 2001 and then more recently in Scottish Planning Policy 2014. The principles seek to secure the Scottish Governments six qualities of place that are of particular relevance to residential neighbourhoods: Distinctive, Safe and Pleasant, Welcoming, Adaptable, Resource Efficient, and Easy to Move Around and Beyond.

- › The neighbourhood design principles seek housing with a strong sense of place and local identity.
- › The neighbourhood design principles link activity areas with the hierarchy of routes and compatible housing densities.
- › The neighbourhood design principles seek street and housing design that compliments the role of public spaces, open spaces and other focuses for community activity that will foster a sense of place and identity for residents.

This section describes the proposed structure and urban form of New Brunstane in terms of:

- › Legibility
- › Gateways
- › Openness and enclosure
- › Neighbourhood facilities
- › Housing mix and tenure
- › Scale
- › Density
- › Phasing

Section 4 describe streets and spaces in detail and Section 5 defines the parameters in the form of an Urban Design Code.



NEW BRUNSTANE: BUILDING ON THE EXISTING LANDSCAPE CHARACTER AND IDENTITY

Legibility

New Brunstane’s distinct identity builds upon the existing landscape character responding to routes, topography and views. Distinctive spaces, builtform and views out to the wider landscape provide legibility within New Brunstane.

The organic layout of streets is a response to the topography. Throughout, the built form is integrated with landscape elements such as view corridors and surface water swales.

An urban square is located along the principal street beside the primary school and local centre.

Green spaces are a response to the existing heritage and landscape features.

Gateways

Gateways defining the arrival at New Brunstane have contrasting qualities. The southern gateways emphasise the urban character whereas the northern gateway is characterised by the landscape of Portobello Cemetery, the golf course and crossing Brunstane Burn.



Openness and Enclosure

Continuous defined frontages frame the primary streets, secondary streets and public spaces. Frontage buildings should be designed to provide overlooking and focus activity in the public realm.

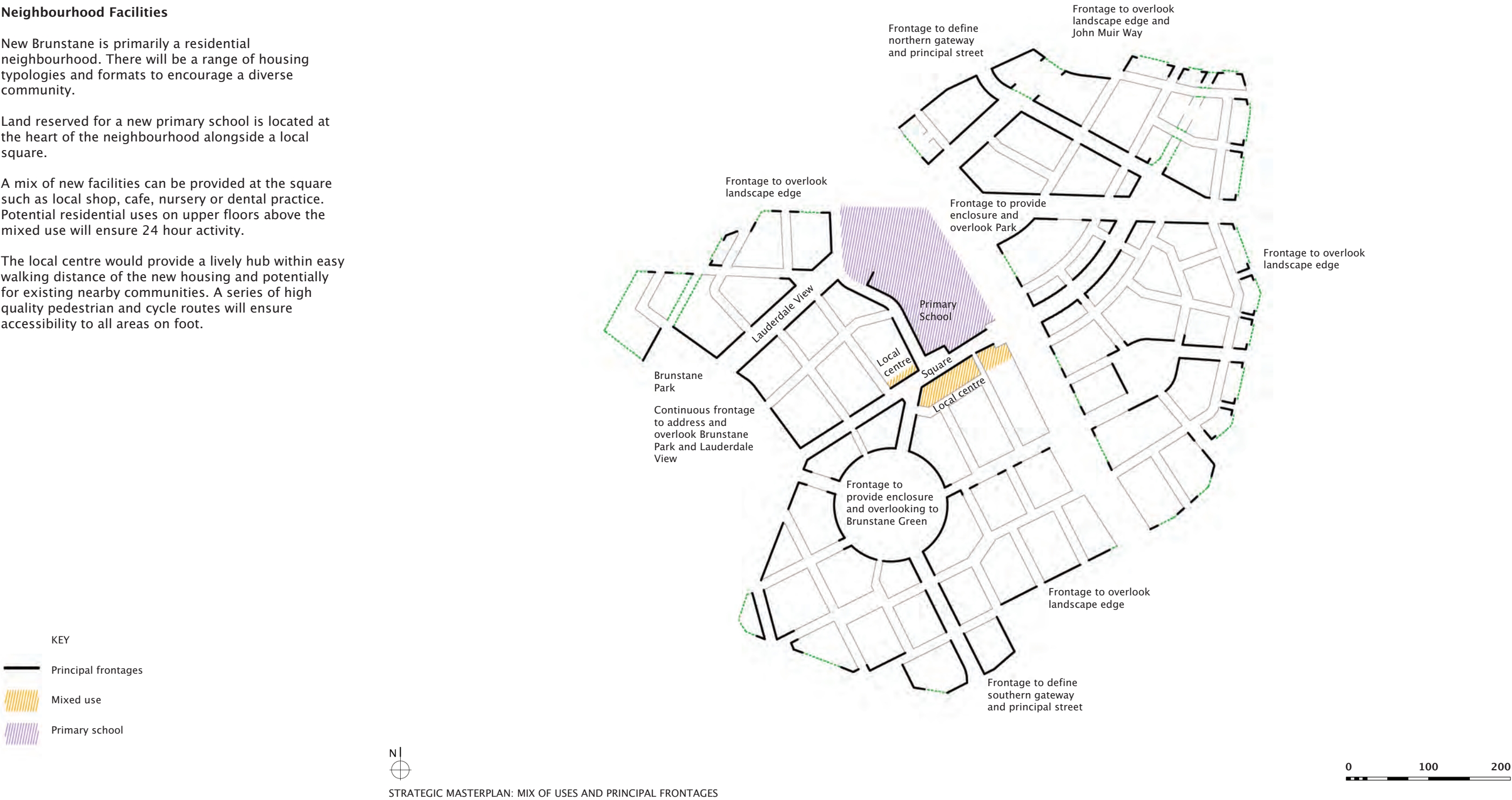
Neighbourhood Facilities

New Brunstane is primarily a residential neighbourhood. There will be a range of housing typologies and formats to encourage a diverse community.

Land reserved for a new primary school is located at the heart of the neighbourhood alongside a local square.

A mix of new facilities can be provided at the square such as local shop, cafe, nursery or dental practice. Potential residential uses on upper floors above the mixed use will ensure 24 hour activity.

The local centre would provide a lively hub within easy walking distance of the new housing and potentially for existing nearby communities. A series of high quality pedestrian and cycle routes will ensure accessibility to all areas on foot.



Housing Mix and Tenure

New Brunstane is designed to provide a varied spectrum of houses and apartments in a mix of tenures to enable a sustainable community to emerge.

A broad range of types of housing are intended from larger family homes, quality smaller houses and apartments to housing for the retired and elderly. Flexible house types will be encouraged to allow adaptability over time.

At least twenty five percent of the housing at New Brunstane will be affordable homes which will be provided in a range of different tenures including affordable renting and low cost home ownership. The affordable housing would be indistinguishable such that this forms an integral part of a single community.

Along with the local access to public transport and the high quality environment for a range of social and leisure activities the intent is to build on the idea of a healthy sustainable neighbourhood. There would be opportunities for people to remain in the locale through their education, working life and into retirement through providing adaptable housing, sufficient choice and a variety of local facilities.

Scale

Building heights vary from 3 and 4 storey along parts of the principal street to 1.75 storey at the landscape edges. The architectural language will provide variety and diversity

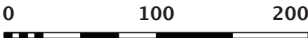
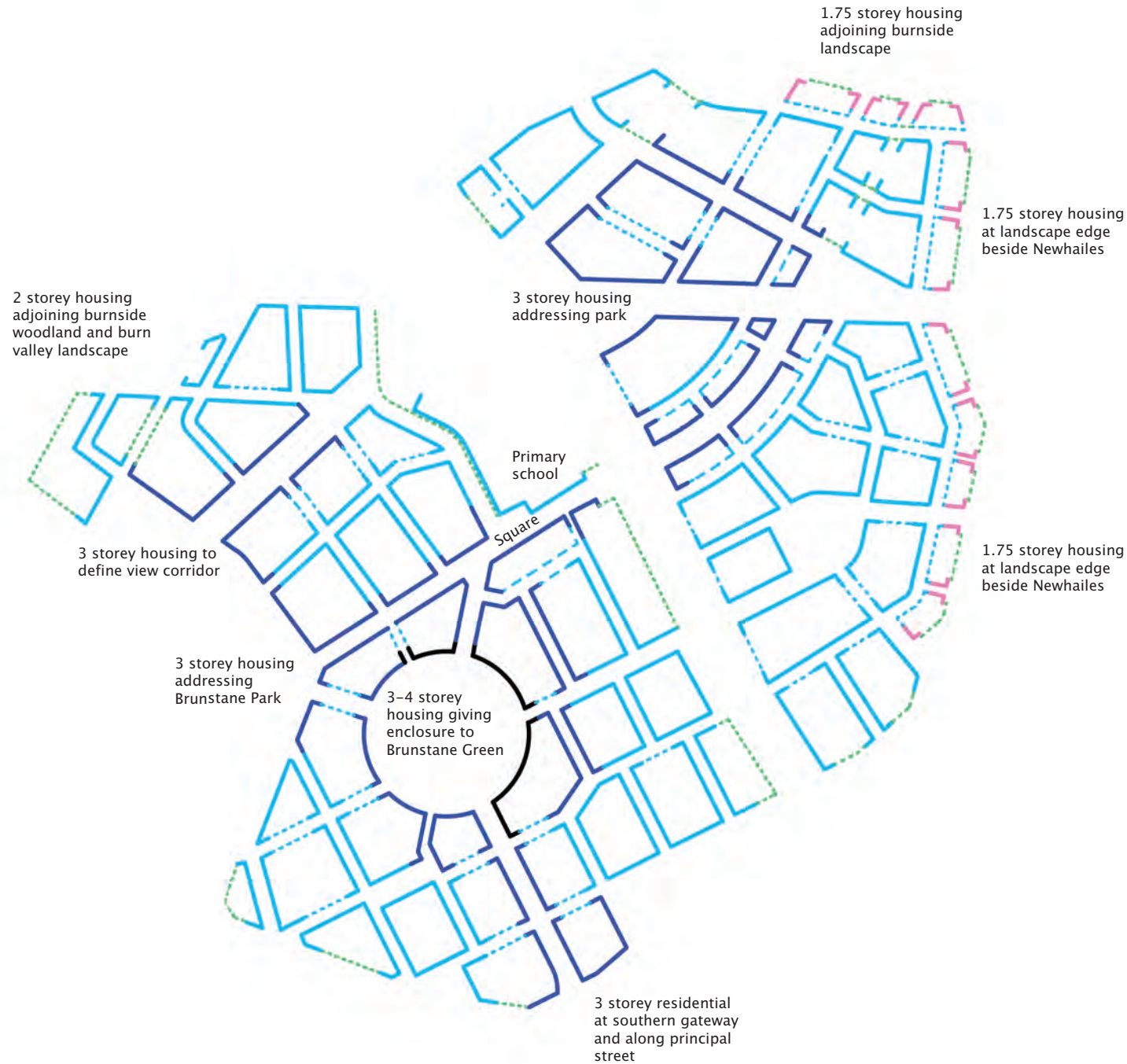
The scale of buildings will define the edges to the spaces and provide enclosure and shelter.

Section 4 details typical cross sections through streets and spaces.

- KEY
- 4 storey
 - 3 storey
 - 2 storey
 - 1.75 storey
 - 2 storey ancillary
 - Garden wall
 - Turf wall / hedge



STRATEGIC MASTERPLAN: BUILDING HEIGHTS



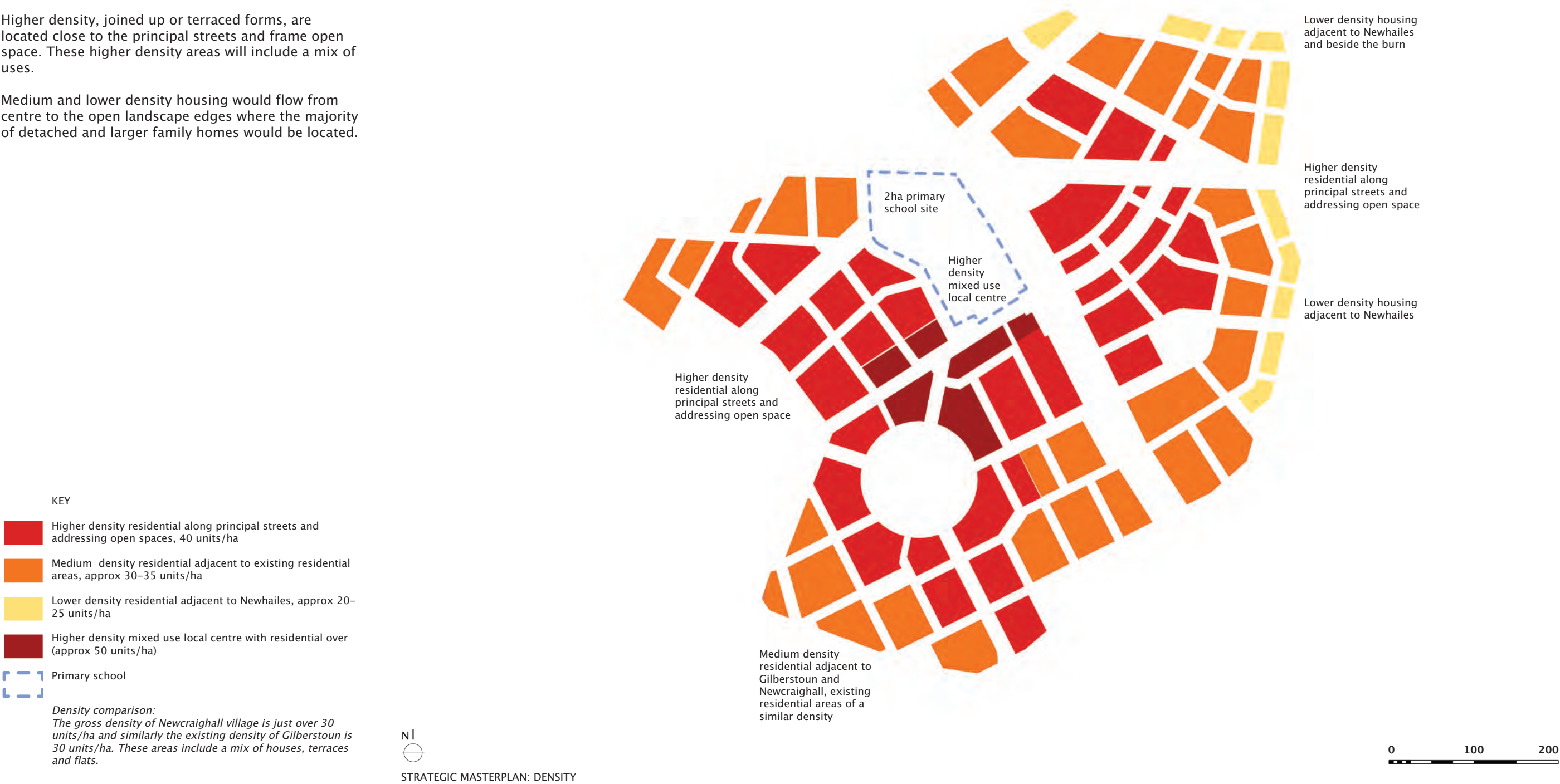
Density

The character of New Brunstane is derived from the intensity of urban streets in contrast with the lower density areas and open spaces.

Denser urban forms address the main walking and cycle routes, the parks and public gardens such that there are more people around and these will become well-used, attractive and safer places day and night.

Higher density, joined up or terraced forms, are located close to the principal streets and frame open space. These higher density areas will include a mix of uses.

Medium and lower density housing would flow from centre to the open landscape edges where the majority of detached and larger family homes would be located.



3.5 phasing

Development phasing ensures that each phase forms a coherent whole with a defined boundary.

The phasing strategy is proposed based on the two known thresholds that may apply:-

- > 200 units in the east field
- > 425 units overall prior to new school provision

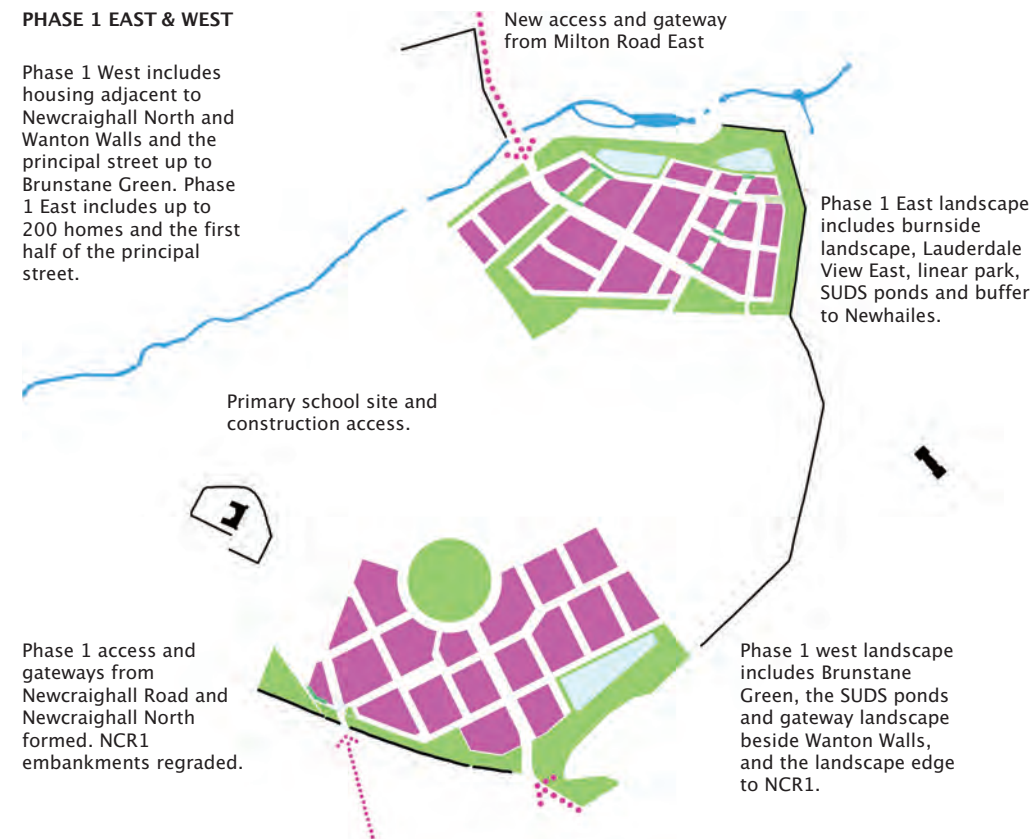
The indicative phasing plans suggest the first phases are developed across both east and west fields, adjacent to new accesses; followed by further phases associated with the construction of the bridge crossing over the railway.

However, alternatives are also possible, for instance, all first phases; ie 425 units are developed in the west field before necessitating the school provision.

Landscaping associated with each phase is to be implemented with that phase, however, tree planting in Brunstane Park may be implemented earlier to allow the trees to establish. The remainder of the park will be implemented alongside the adjacent phase 3. Similarly SUDS basins will need to be implemented early in the phasing.

PHASE 1 EAST & WEST

Phase 1 West includes housing adjacent to Newcraighall North and Wanton Walls and the principal street up to Brunstane Green. Phase 1 East includes up to 200 homes and the first half of the principal street.



PHASE 2 EAST & WEST

The principal street is implemented through the western field providing access to the school. The square is framed and the local centre facilities can be implemented.

Burnside landscape, and SUDS ponds implemented.



PHASE 3 EAST & WEST

To the west Brunstane Park and Lauderdale View are implemented. Housing addressing both Brunstane Park and Lauderdale view are delivered.



PHASE 4 EAST & WEST

New Brunstane is completed through the development of housing in the north west corner and in the southern corner in the east field. Landscape and open spaces are completed.



STRATEGIC MASTERPLAN: PHASING

3.6 strategic masterplan



4 place

This section illustrates the three dimensional character of New Brunstane.

It establishes the qualities of the urban spaces, the sequence of open spaces and landscape edges followed by the characteristics of typical residential streets. It also illustrates how the swales and SUDS ponds are integrated with the streetscape design.

4.1 Principal Street

- › Brunstane Green
- › The Square
- › Bridge over railway
- › Intersection with Linear Park

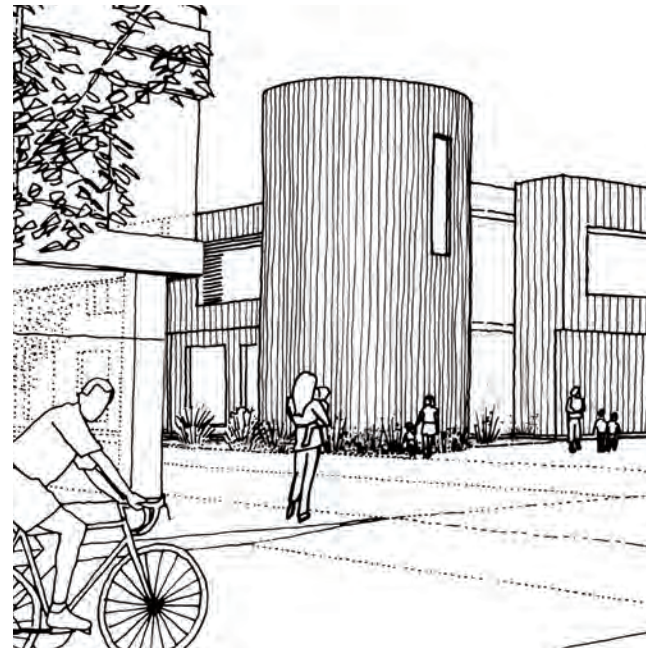
4.2 Open Space Sequence

- › Brunstane Walk
- › Brunstane Park
- › Brunstane Avenue
- › Lauderdale View
- › Linear Park
- › Amphitheatre

4.3 Landscape Edges

- › Edge to Brunstane Burn Valley
- › Edge to Newhailes
- › Edge to Wanton Walls
- › Edge to Newcraighall North

4.4 Residential Streets



4.1 principal street

This sub-section describes the characteristics of the principal street including the open spaces along the route.

The principal street connects Milton Road East with Newcraighall Road to the south. Local bus routes already operate on the main roads around the site to the north and south serving a variety of key destinations. The creation of a north to south vehicular route between Milton Road East and Newcraighall Road presents an opportunity for a new or diverted bus route to directly serve the site, and supports wider aspirations to provide additional links to Queen Margaret University.

In order to facilitate access to the site, a number of engineering upgrades are proposed. A new access into the site will be required from Milton Road East in the north, as well as development/alteration to primary and secondary accesses into the site from Newcraighall Road in the south. The existing bridge over ECML will be replaced and a new crossing formed over the Brunstane Burn. Both bridge crossings will be designed to accommodate a 7.3m wide carriageway suitable as a bus route, a 3m foot/cycle path and a 2m footpath. It is anticipated that these will be designed at detail design stage.

A 3m combined foot/cycle path runs the length of the principal street, allowing integration with the wider foot and cycle network whilst also establishing a direct link between NCR1 with the John Muir Way. Where the route meets the John Muir Way there will be slight adjustments to the line of the path in order to maintain a level crossing point.

Three public spaces are located at points where the orientation of the street changes. The detail design of these spaces, geometry and changes in direction are used to reduce traffic speeds along the route.

The three spaces – Brunstane Green, the Square and the linear park – each have a different character, function and identity.

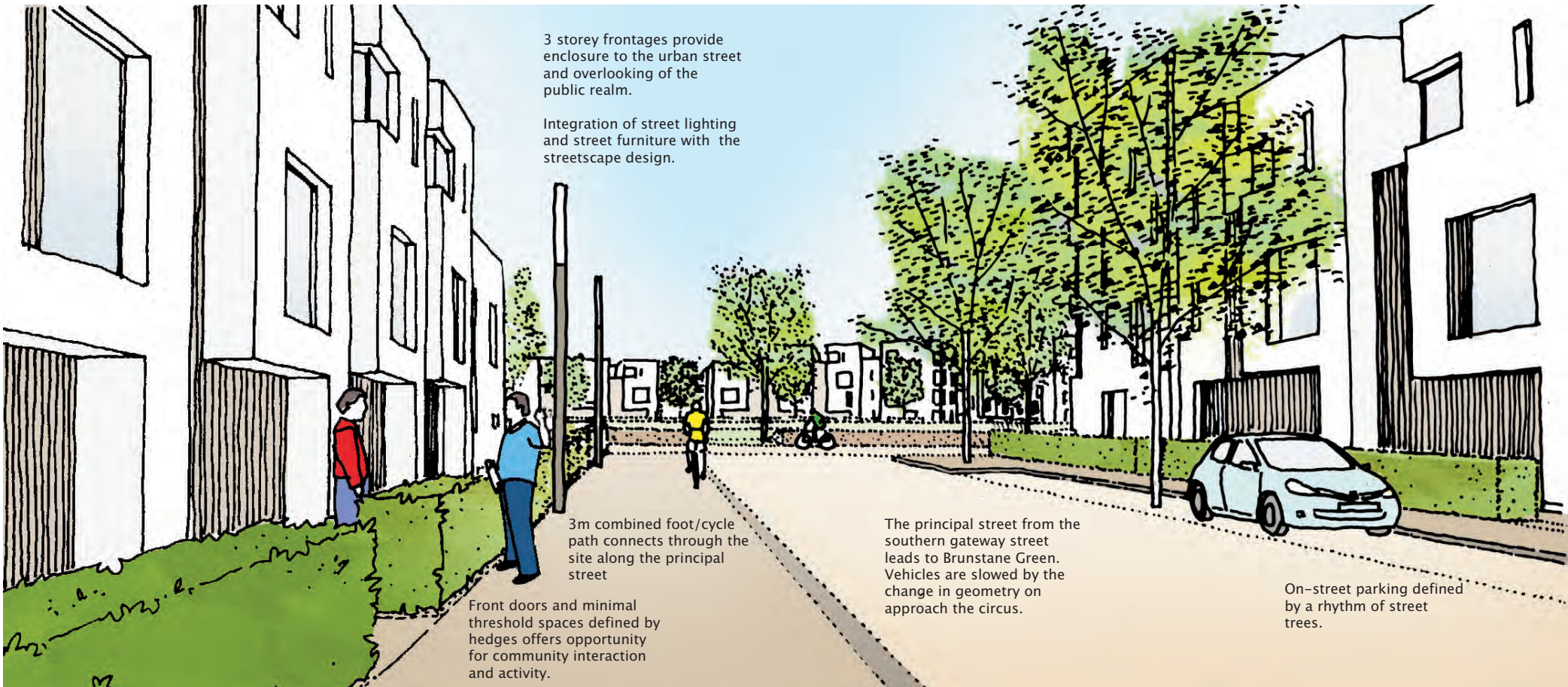
The following pages describe the journey north from Newcraighall along the principal street and how this route is interrupted by the three spaces.



PRINCIPAL STREET PLAN

Characteristics of the Principal Street

- › A tree lined avenue fronted by 2–4 storey buildings. Refer to the Building Heights diagram in section 3 for specific locations.
- › 7.3m wide or ideally 6m (to be agreed with CEC at detail design stage) vehicle carriageway forming the bus route.
- › A 3m wide combined foot and cycle path to one side.
- › On the opposite side is a 2m footpath.
- › On-street parking spaces integrated into the streetscape design.
- › Proximity of front doors encouraging community life and activity.
- › Narrow front garden, or threshold spaces, 2–3m, defined by planting contributing to street enclosure.
- › Discreet car parking integrated with the streetscape design, as a combination of on-street, in-curtilage within pends, in mews streets or undercroft (where levels permit).



THE PRINCIPAL STREET, LOOKING TOWARDS BRUNSTANE GREEN



KEY PLAN



3 storey residential with front doors addressing the street

Threshold

3m combined foot/cycle path

7.3m principal street and bus route

On-street parking

Footpath

Threshold

3 storey residential with front doors addressing the street

On-street parking is integrated into the streetscape with a rhythm of street trees.

Note: The heights of building varies between 2 to 4 storeys along the principal street. Refer to the Building Heights diagram in section 3 for specific locations.

SECTION 4.1A_TYPICAL SECTION THROUGH THE PRINCIPAL STREET

brunstane green

Characteristics of Brunstane Green

Inspired by the traditional Edinburgh circus the proposed open space is centred on the Scheduled Monument.

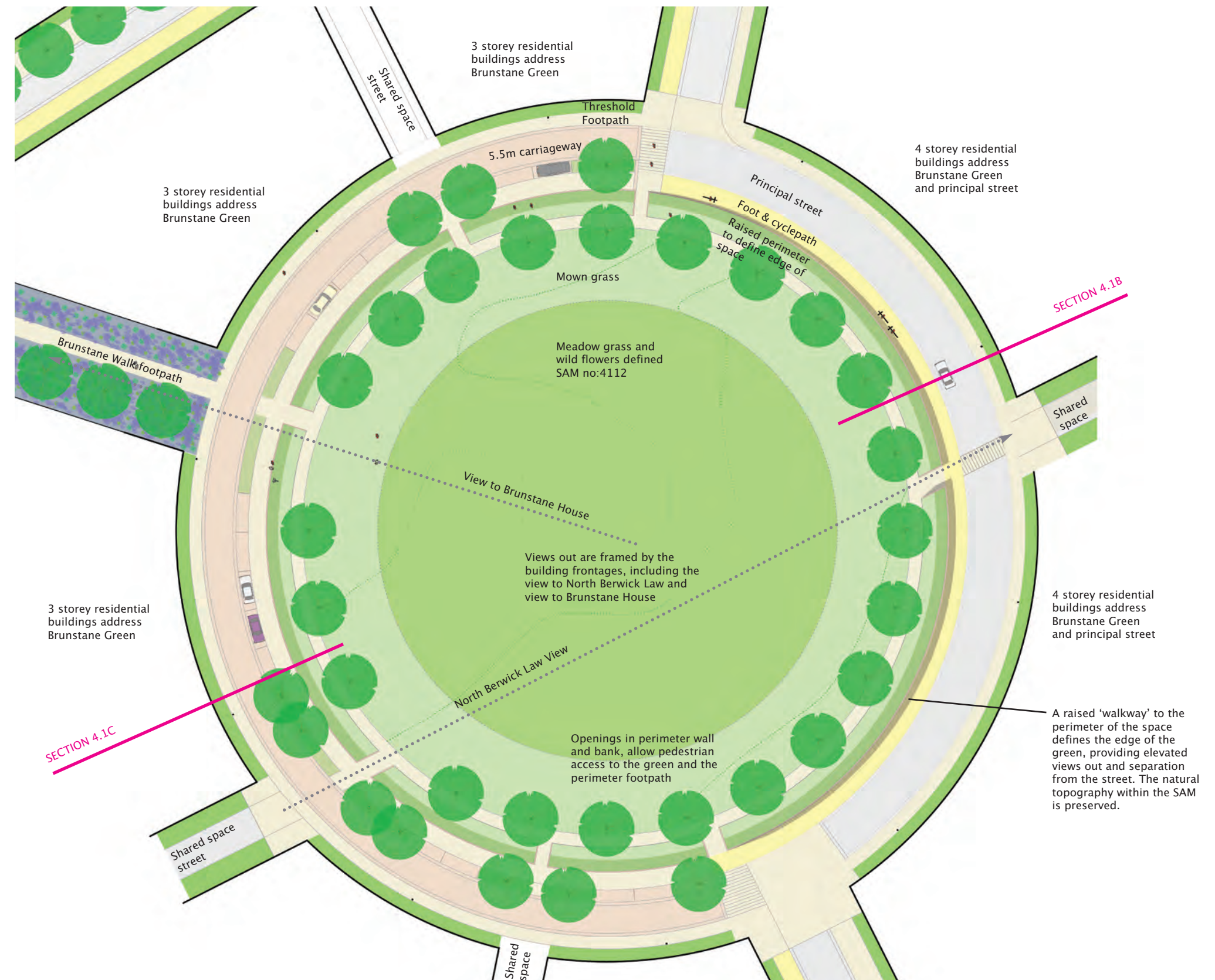
A public green space contained by a raised walk, reminiscent of the 'lady's walk' in Newhailes. The existing topography of the Scheduled Monument is retained. The outline of the monument defined by meadow grass, shown darker green on the plan. A buffer to the monument, represented by pale green on plan, includes tree planting and a circular footpath. Interpretation boards describing the historical features will be designed as part of the space.

The future detail design of this space will involve dialogue with CEC and HES on protection of the monument, interpretation, use and appropriate planting.

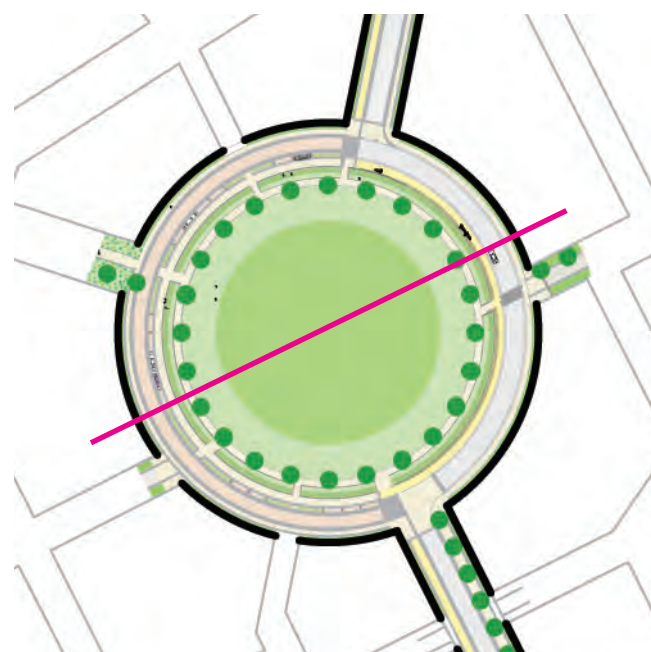
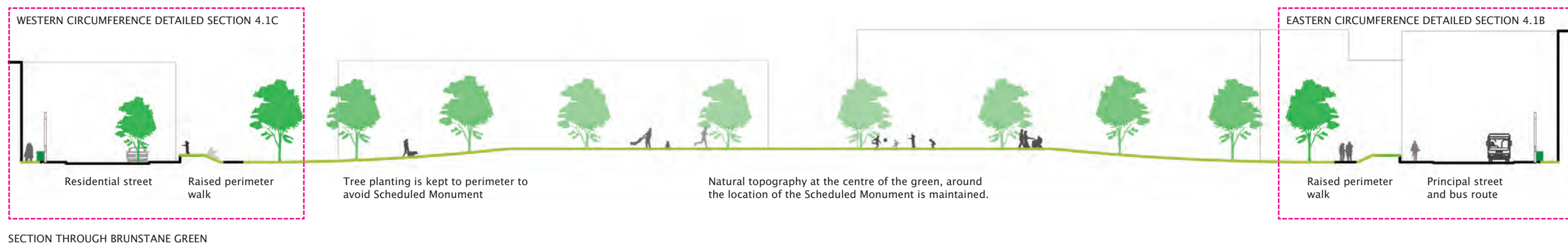
The view to Brunstane House from the centre of the green was identified by CFA as an important part of the setting of Brunstane House. This view has been retained in the masterplan. A landscape walk, Brunstane Walk, links the green with Brunstane Park to the north-west.

The principal street and cycle path is deflected around the eastern circumference of Brunstane Green. Potential higher density 4 storey buildings front onto this side of the green. To the western side a residential street gives access to 3 storey housing. On street parking is integrated into the streetscape.

The threshold spaces to residential properties should be designed in a consistent manner around the space. Pedestrian crossings are to be provided along desire lines.

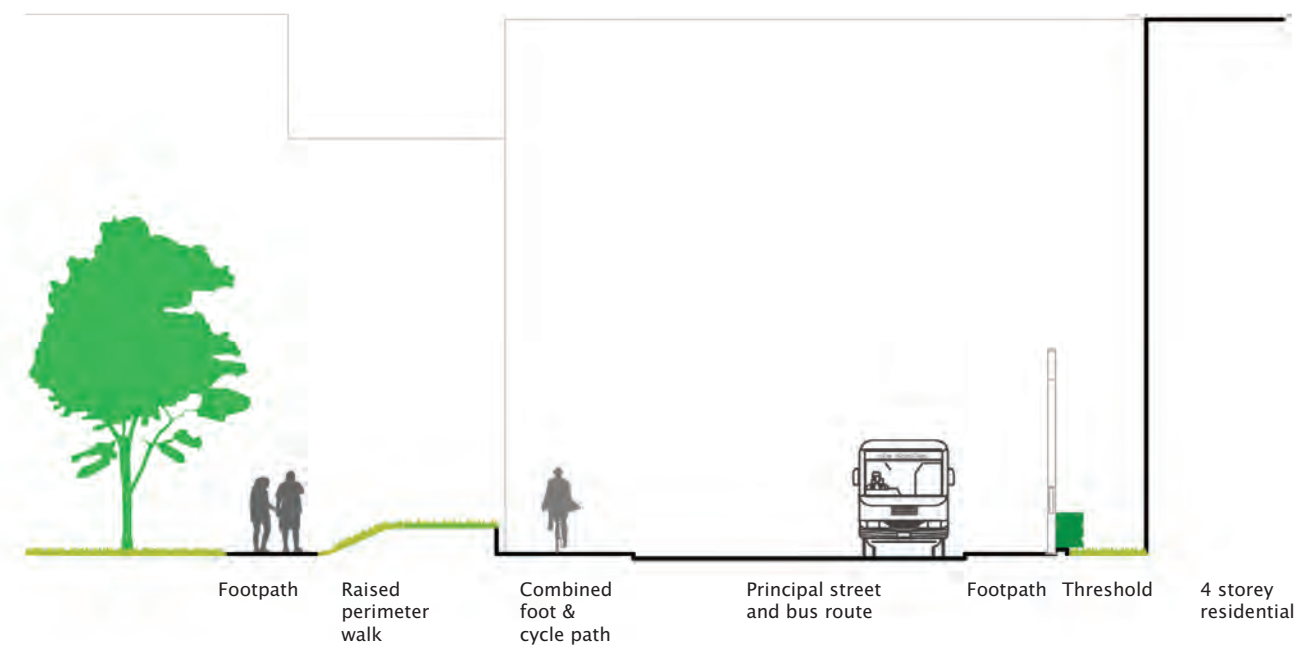


PLAN OF BRUNSTANE GREEN



Brunstane Green – Eastern Edge

- › The principal street is deflected around the eastern circumference of Brunstane Green.
- › 4 storey residential buildings with 2m threshold spaces front onto the public realm.
- › 7.3m wide carriageway (bus route) with a 2m pavement to the outer edge and a 3m wide combined foot and cycle path on the park side.
- › Raised walk to define the perimeter of the Green.

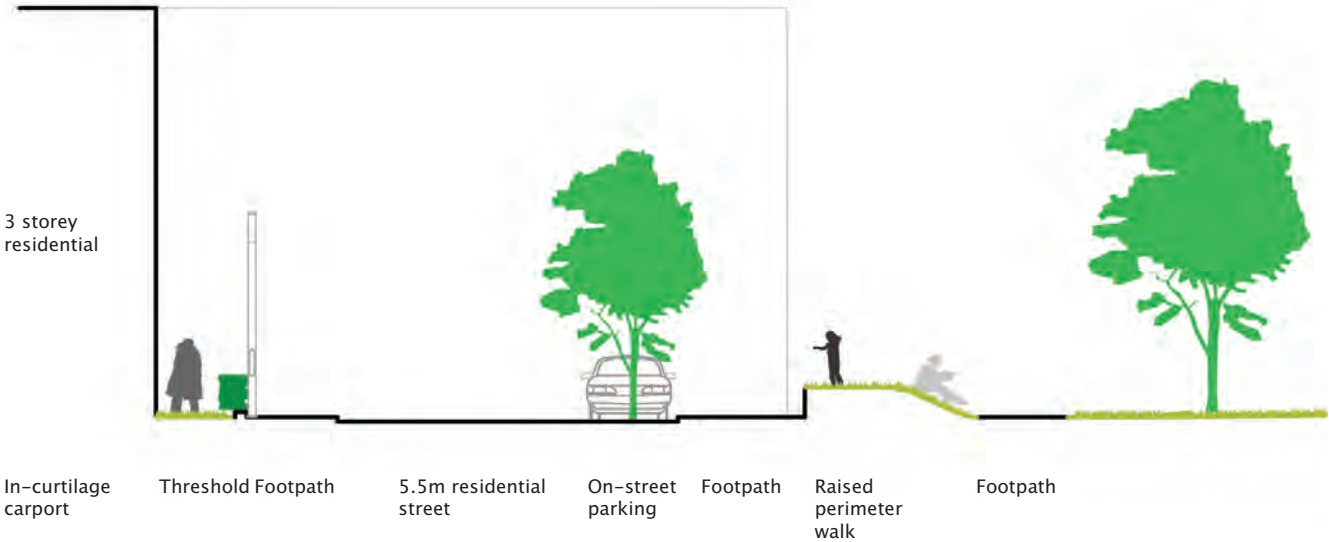
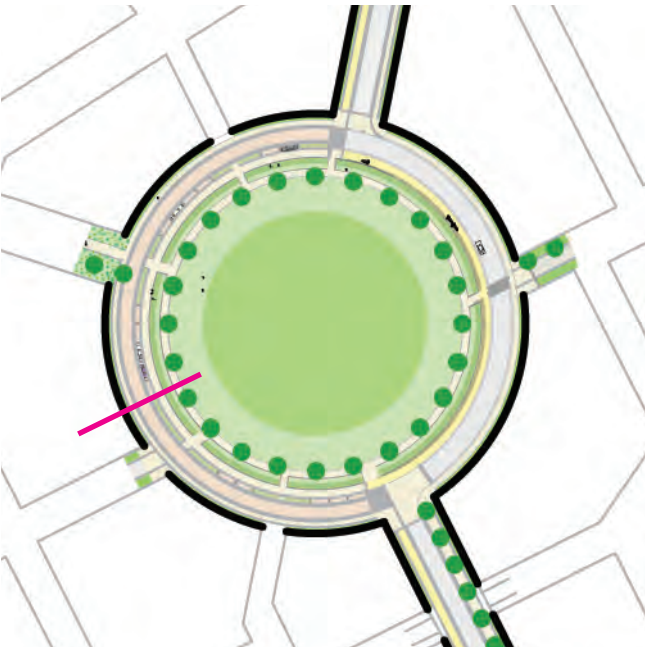


Brunstane Green – Western Edge

- › The principal street is deflected around the eastern circumference of Brunstane Green.
- › 3 storey residential buildings with 2m threshold spaces front onto the public realm.
- › 5.5m wide residential street with a 2m pavement to the outer edge.
- › Car parking is either on-street, in mews or in-curtilage within pends.
- › On the park side on-street parking is integrated with street trees.
- › Raised walk to define the perimeter of the Green.



THE WESTERN CIRCUMFERENCE OF BRUNSTANE GREEN

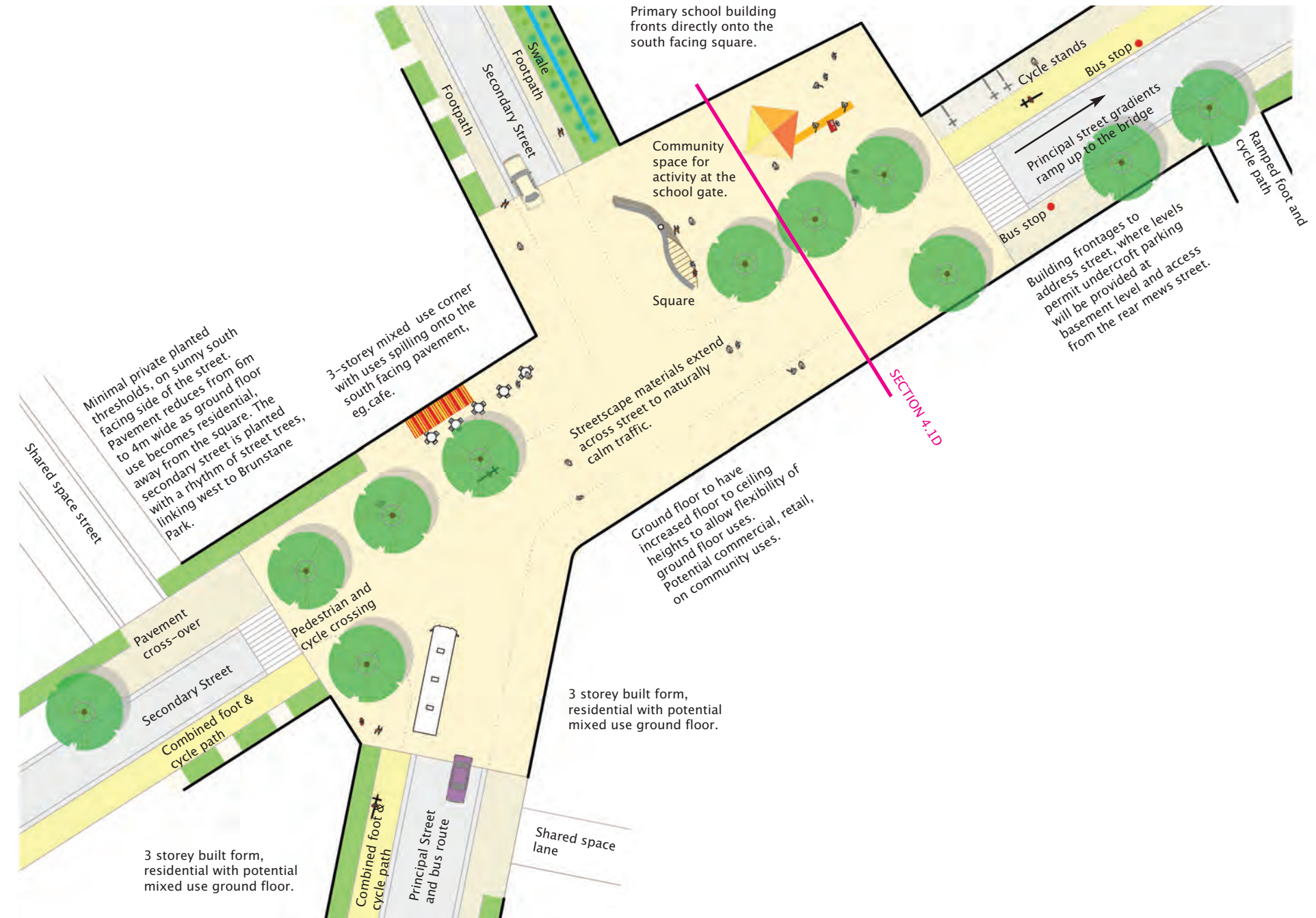
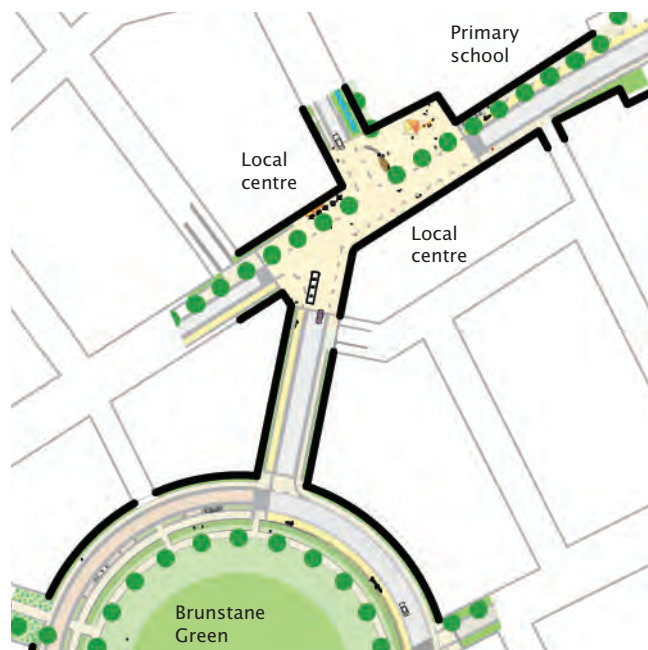


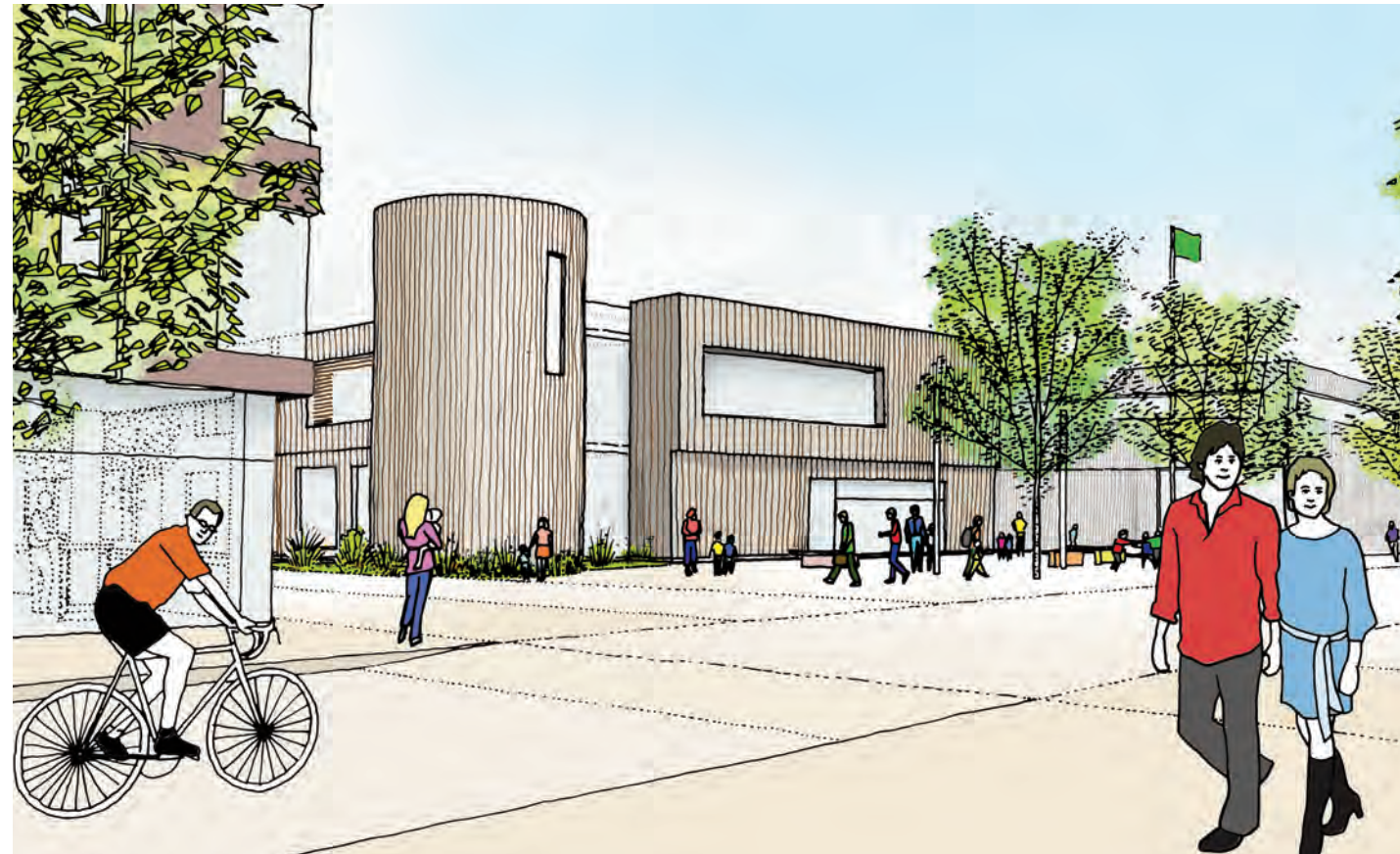
SECTION 4.1C_DETAILED SECTION THROUGH WESTERN PERIMETER OF BRUNSTANE GREEN AND RESIDENTIAL STREET

the square

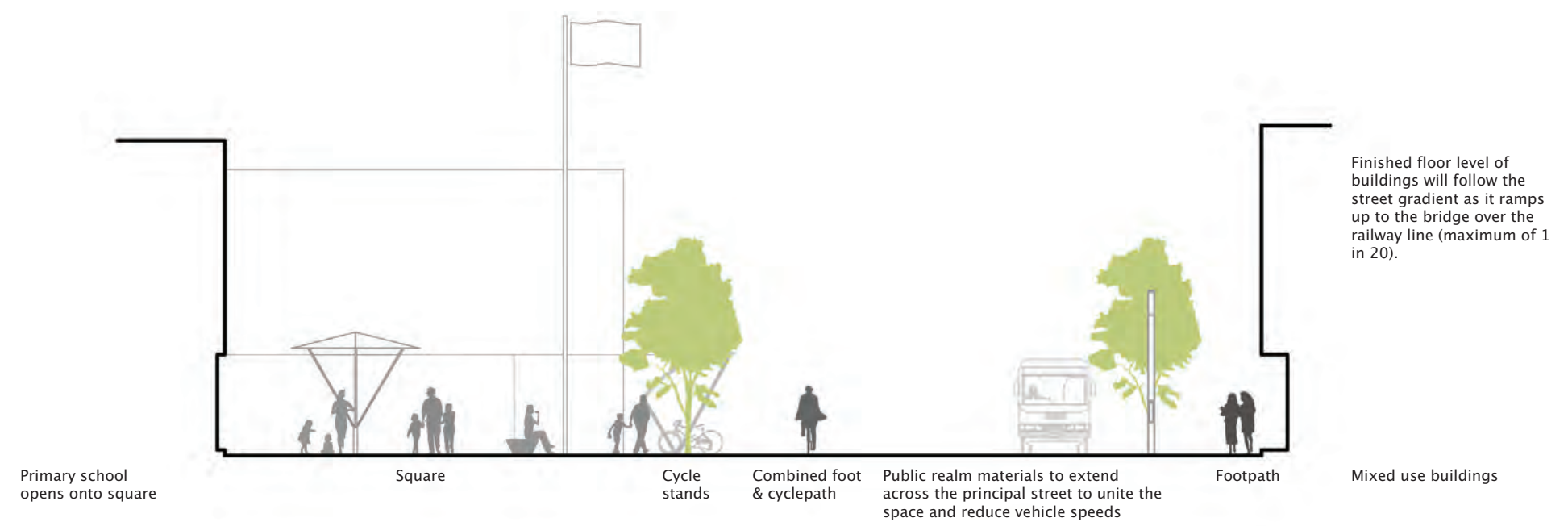
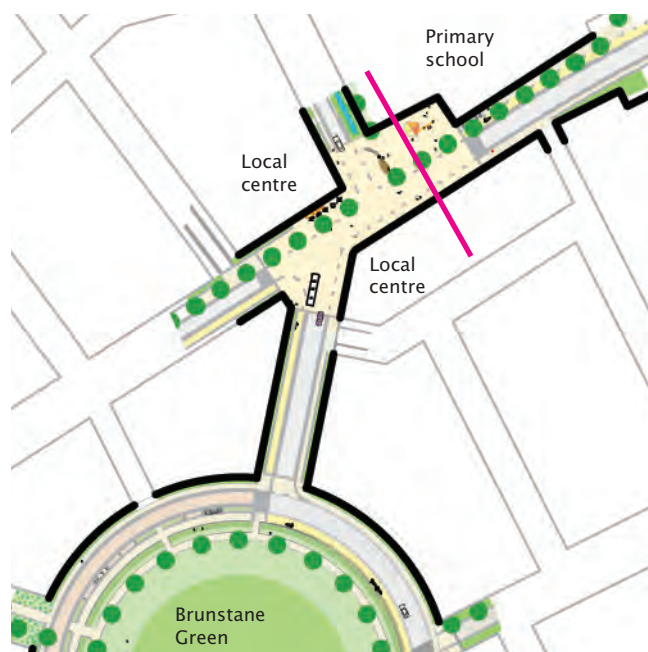
Characteristics of the Square

- › A community space at the school gate.
- › Local centre facilities to front onto the square.
- › A central hard landscaped public space designed as a continuous shared surface between buildings.
- › Framing of the space by 3 storey mixed-use buildings to generate 24 hour activity and passive surveillance.
- › Incorporation of street trees, furniture and other subtle measure to reduce traffic speed, alter driver perceptions and prioritise pedestrian activity.
- › Pedestrian and cycle routes provide a safe route to school.



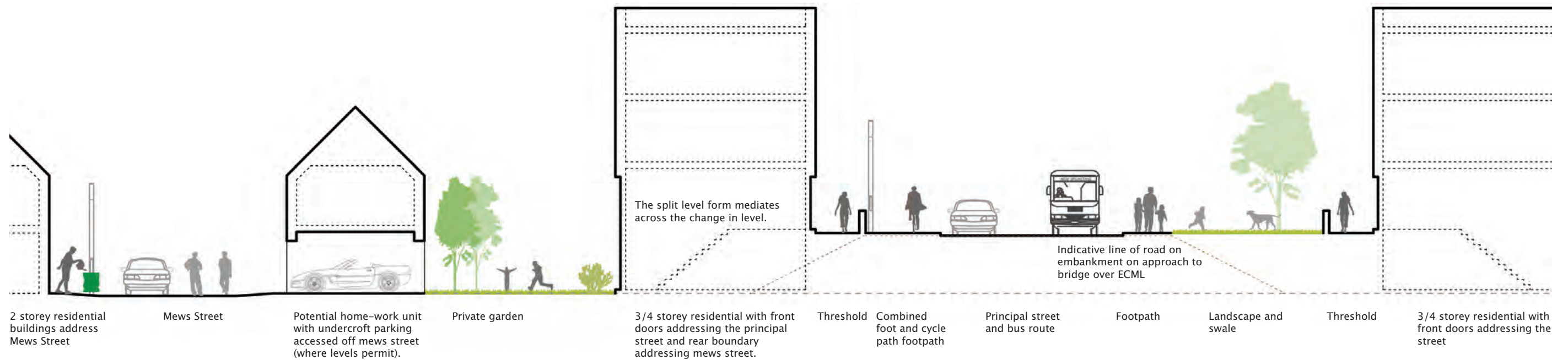


PRIMARY SCHOOL OPENING ONTO THE SQUARE



SECTION 4.1D_SECTION THROUGH SQUARE

bridge over railway



SECTION 4.1E_SECTION THROUGH THE PRINCIPAL STREET ADJACENT TO BRIDGE OVER THE RAILWAY

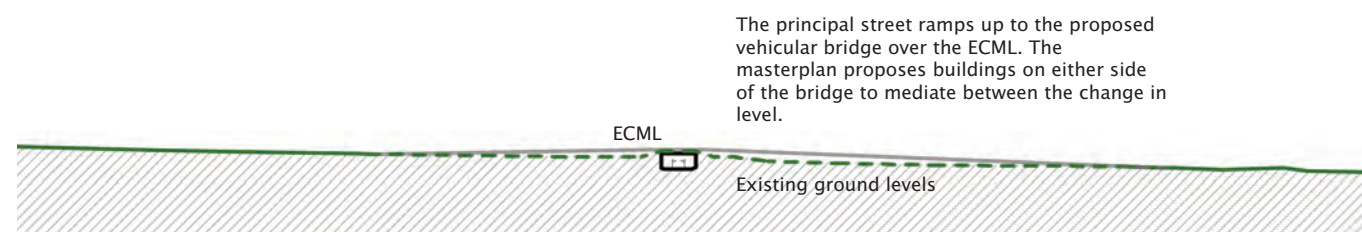
A new bridge crossing will be built in the vicinity of the existing bridge over East Coast Main Line (ECML). This new bridge will accommodate a 7.3m wide carriageway suitable as a bus route, a 3m foot/cycle path and a 2m footpath.

Narrowings of the carriageway may be included to reduce vehicle speeds particularly where the principal street crosses the square.

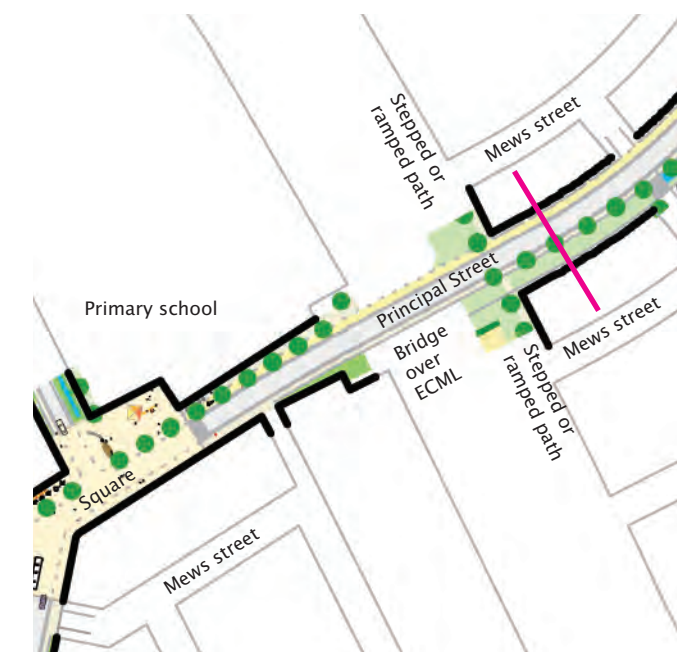
The principal street will ramp up on either side to meet bridge. Rather than exposing embankments on each side of the street an urban solution is proposed such that buildings are designed to address the change in level.

Closer to the bridge where the change in level is greatest undercroft parking can be accessed from a mews street. In locations where the change in level is less than a storey split level buildings can be used to mediate between the changes in level across the building plot.

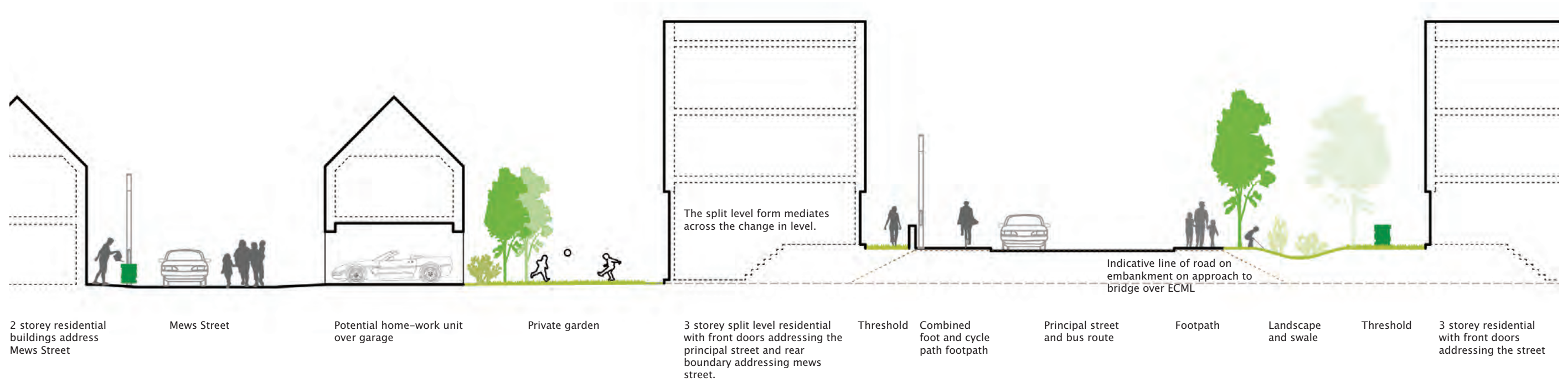
The masterplan anticipates that the frontage to the primary school will similarly mediate between levels. If this is not possible the frontage could be set back and a landscape embankment could be employed in this location, however, this would need to be balanced with ensuring adequate enclosure of the square.



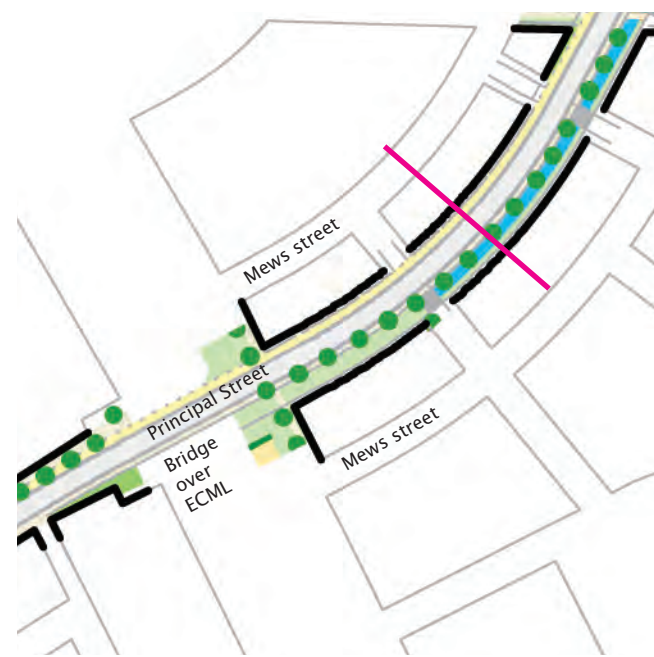
SECTION ALONG THE PRINCIPAL STREET AT BRIDGE OVER ECML



KEY PLAN



SECTION 4.1F_THROUGH THE PRINCIPAL STREET AS STREET RAMPS UP TO BRIDGE



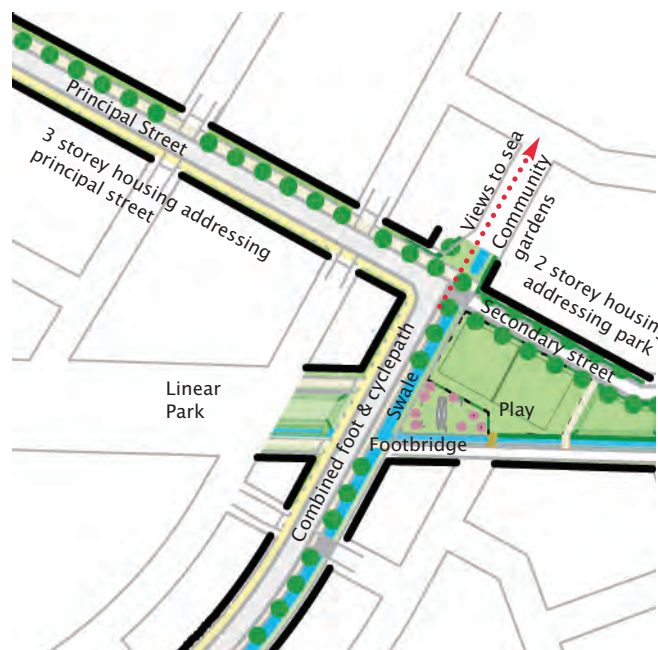
KEY PLAN

intersection with linear park

Views to the Firth of Forth are visible along the principal street as it travels north-east from the bridge.

The principal street forms a T-junction with a secondary street, at the intersection with the linear park. This reduces the requirement for forward visibility and acts as natural traffic calming for vehicles moving through the eastern neighbourhood.

Detail of the Linear Park are included in sub-section 4.2.



KEY PLAN



PRINCIPAL STREET AT INTERSECTION WITH LINEAR PARK AND VIEW TO THE SEA

4.2 open space sequence

The sequence of open spaces, view corridors and landscape edges are described in this section.

- › Brunstane Walk
- › Brunstane Park
- › Lauderdale View
- › Linear Park
- › Amphitheatre Park



brunstane walk

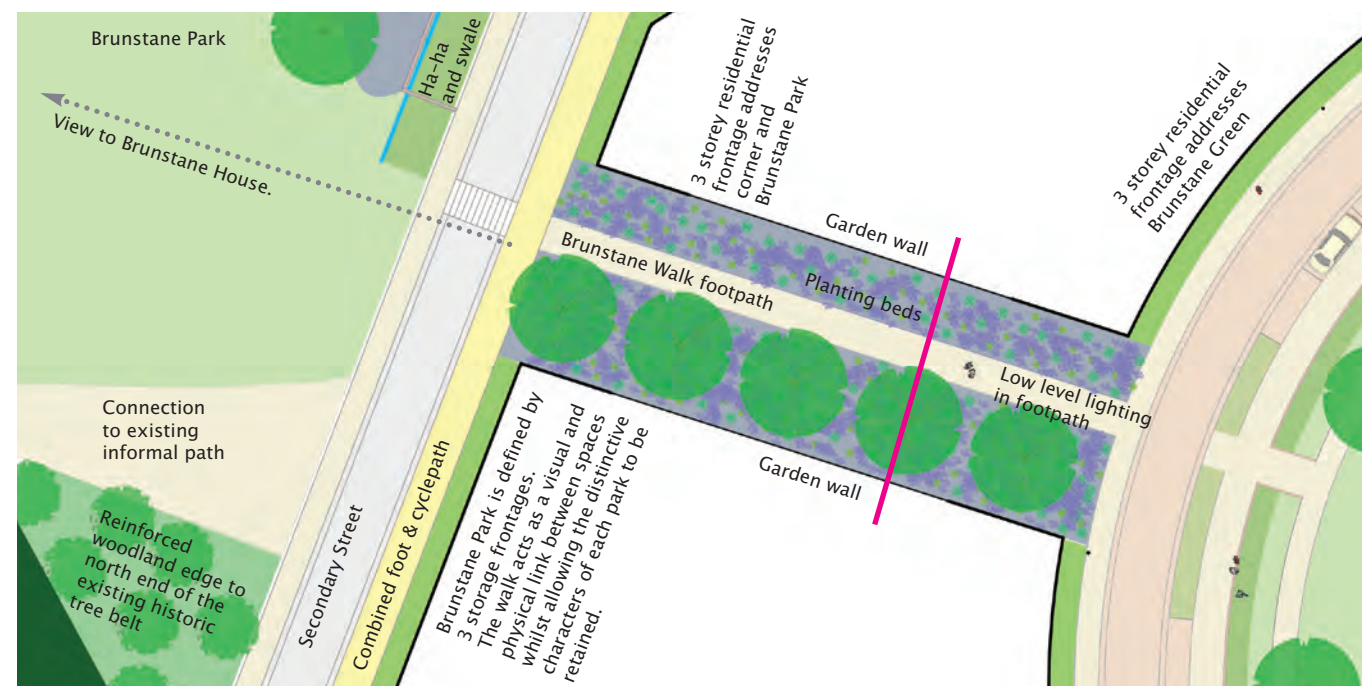
On axis with views to Brunstane House a landscape walk is proposed to connect Brunstane Green to Brunstane Park.

It takes the form of a 17m wide view corridor, framed by 3 storey housing. Due to the scale of Brunstane Green and Brunstane Park, it is important that the builtform between provides definition to the two spaces whilst maintaining this visual and physical connection. This will help ensure that Brunstane Green and Brunstane Park have distinctive characters and spatial enclosure.

A 3m wide footpath is bordered on both sides by planted beds. Low-level LED lighting is intended within the path surface. Trees are located to the southern edge of the walk, so as to avoid obscuring the visible parts of the house. Existing trees within the private walled garden of Brunstane House part-conceal the elevation to the south.



VIEW TOWARDS BRUNSTANE HOUSE ALONG BRUNSTANE WALK FROM BRUNSTANE GREEN



KEY PLAN: BRUNSTANE WALK



SECTION 4.2A_SECTION THROUGH BRUNSTANE WALK

brunstane park

Surrounding the walled garden to the north and east of Brunstane House it is intended to provide a sensitive setting to Brunstane House and safeguard the Scheduled Monument (SM No 10580).

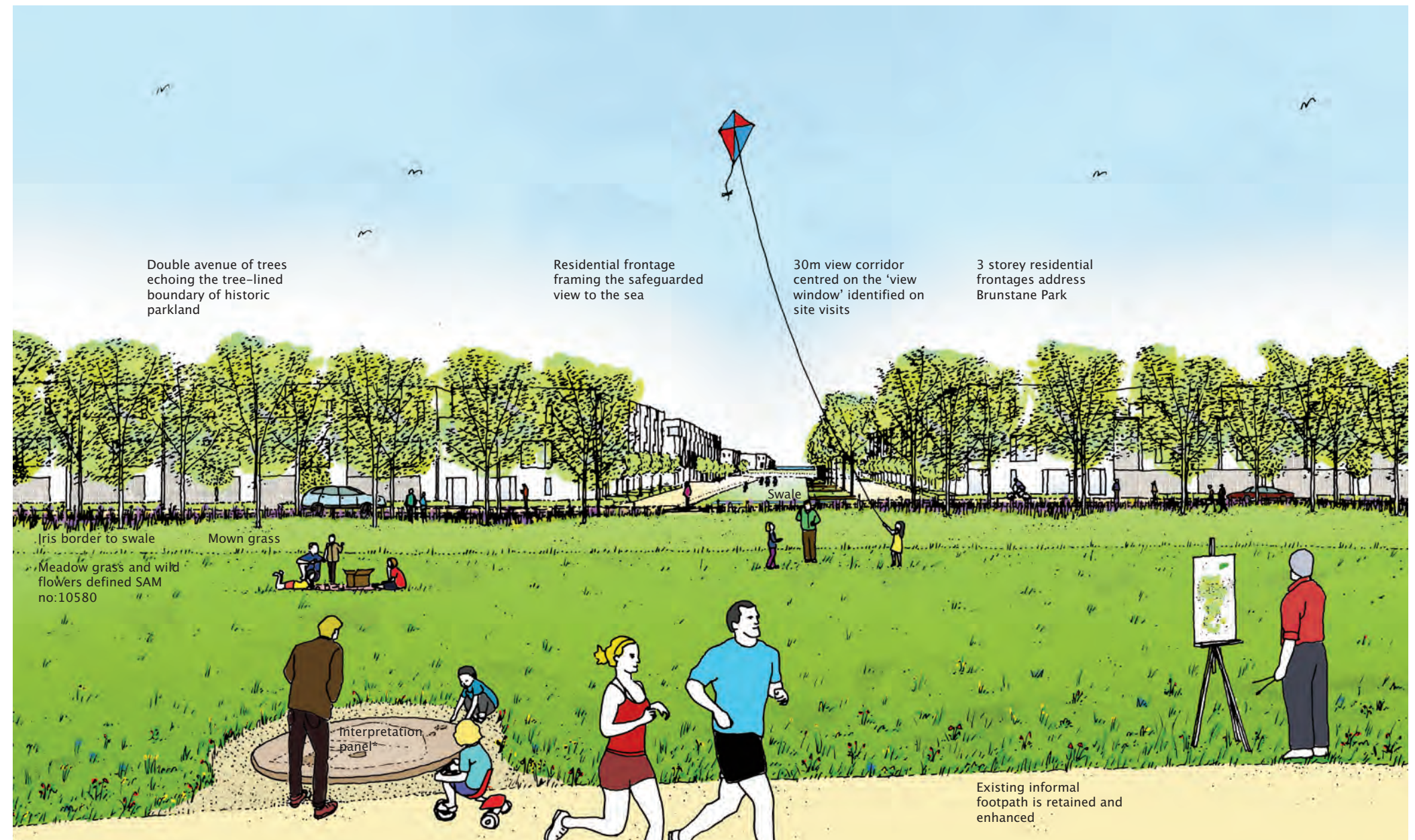
A tree lined boundary dividing the most formal area of landscape close to the house from the parkland beyond was identified on historic maps. The proposed form of the park echoes this boundary. In reference to the designed landscape nearby a double line of trees, a swale and ha-ha define the edge to the park.

The adjoining builtform should be designed to overlook and address the space. A continuous 3 storey residential frontage is proposed.

The future detail design of this park will involve dialogue with CEC, HES and other stakeholders on the protection of the monument, interpretation, use and appropriate planting.

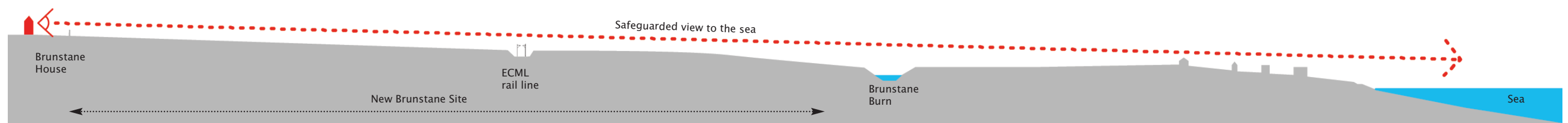


KEY PLAN OF BRUNSTANE PARK



LAUDERDALE VIEW FROM EXISTING PATH BY WALL OF BRUNSTANE HOUSE

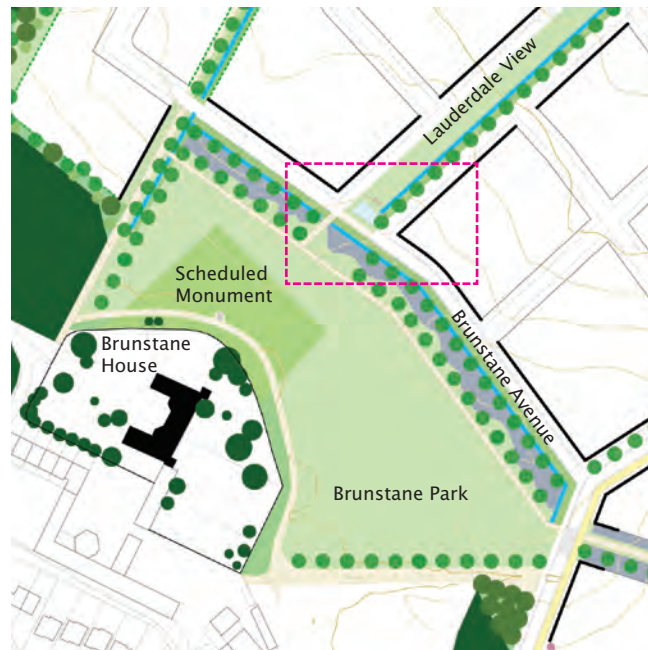
* The location and form of the interpretation panel is indicative only and will subject to detail design at a later stage.



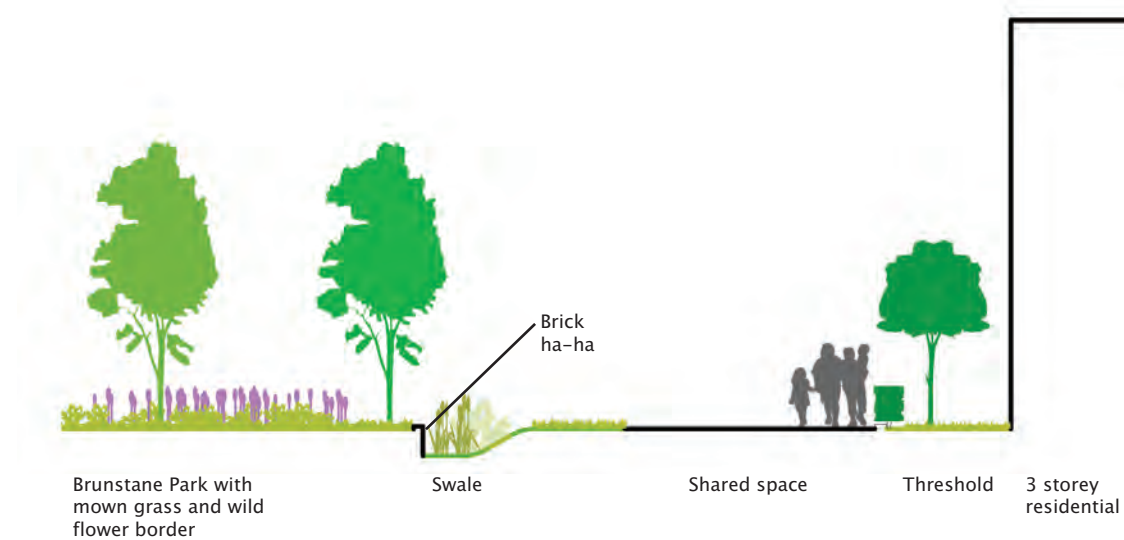
CONCEPT DIAGRAM: LAUDERDALE VIEW SECTION

brunstane avenue

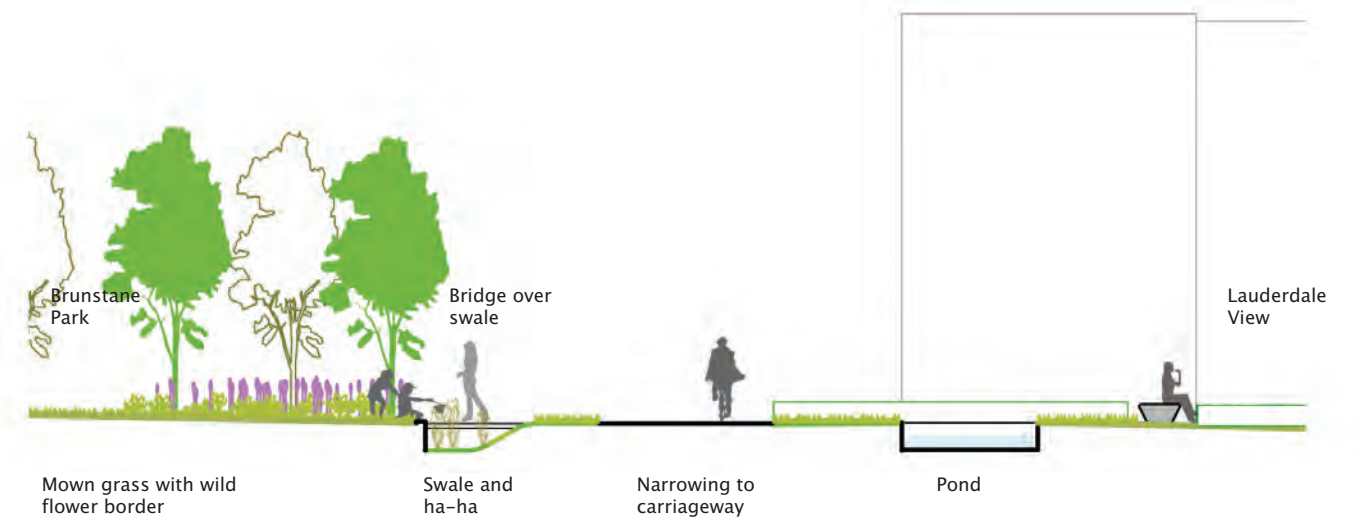
Brunstane Avenue narrows to 3.5m as it crosses the Lauderdale View, this combines with a textured surface to reduce vehicle speeds.



BRUNSTANE AVENUE: DETAIL PLAN OF BRUNSTANE PARK AND TRANSITION TO LAUDERDALE PARK



SECTION 4.2B_DETAIL SECTION THROUGH BRUNSTANE AVENUE



SECTION 4.2C_DETAIL SECTION THROUGH BRUNSTANE AVENUE AT TRANSITION TO LAUDERDALE VIEW

lauderdale view

A linear park is proposed along the view corridor from Brunstane House to the sea.

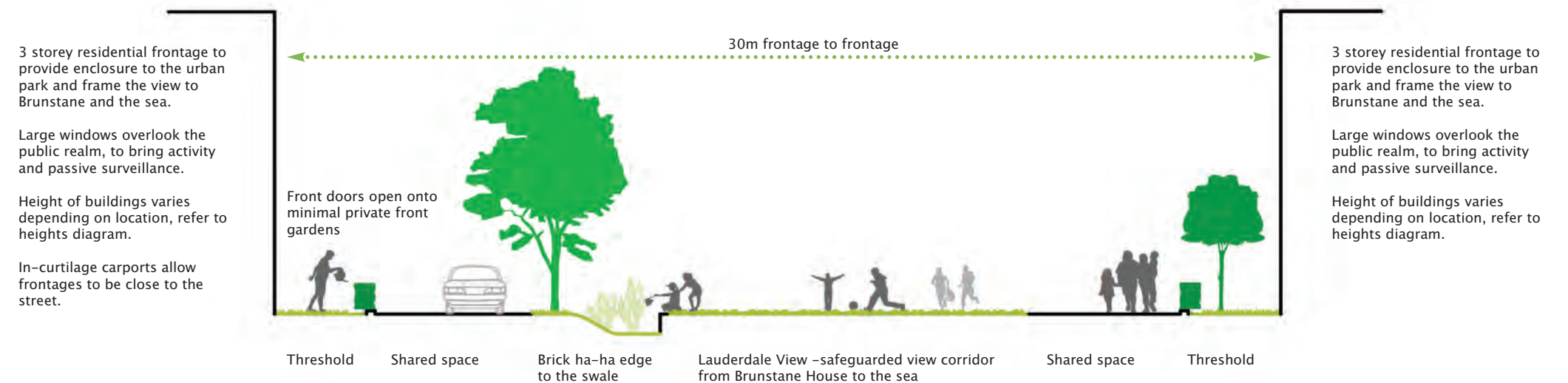
The proposed space is 30m wide, frontage to frontage, defined by 2 and 3 storey residential buildings. Similar to Brunstane Park, a swale and ha-ha line one side of the space.



KEY PLAN



VIEW TO BRUNSTANE HOUSE FROM LAUDERDALE VIEW



SECTION 4.2D_SECTION THROUGH LAUDERDALE VIEW

linear park

The linear park is an acknowledgement of the desire for the view from the Shell Grotto within Newhailes towards Arthur's Seat to be safeguarded, although the existing bulk of the Edinburgh College obscures the base of the hill.

The view corridor is 30m wide, frontage to frontage. A linear park incorporating swales, SUDS basins, orchard trees and play.

In two places the park widens to form play areas. The first at the intersection with the principal street, where the natural topography is more gentle a kick-about pitch is proposed. This triangular space conceals a below-ground SUDS storage. It is separated from the street by a layering of hedges, swales and street trees but connected by footpaths and swale bridges.

The second, at western end of the linear park, a play park takes advantage of the rising topography.

Orchard trees and fruiting hedges are interwoven with the play spaces along the length of the park. Note, the tree planting needs to be outwith the Scottish Water wayleave.

The surrounding built form provides enclosure and passive surveillance.

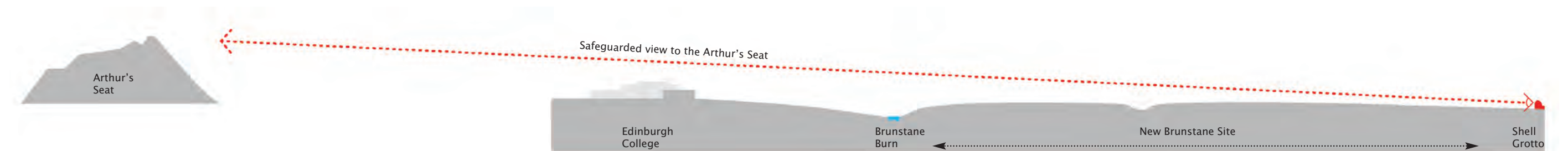
The pattern shared space streets surrounding the park offer walking routes and views to the sea.



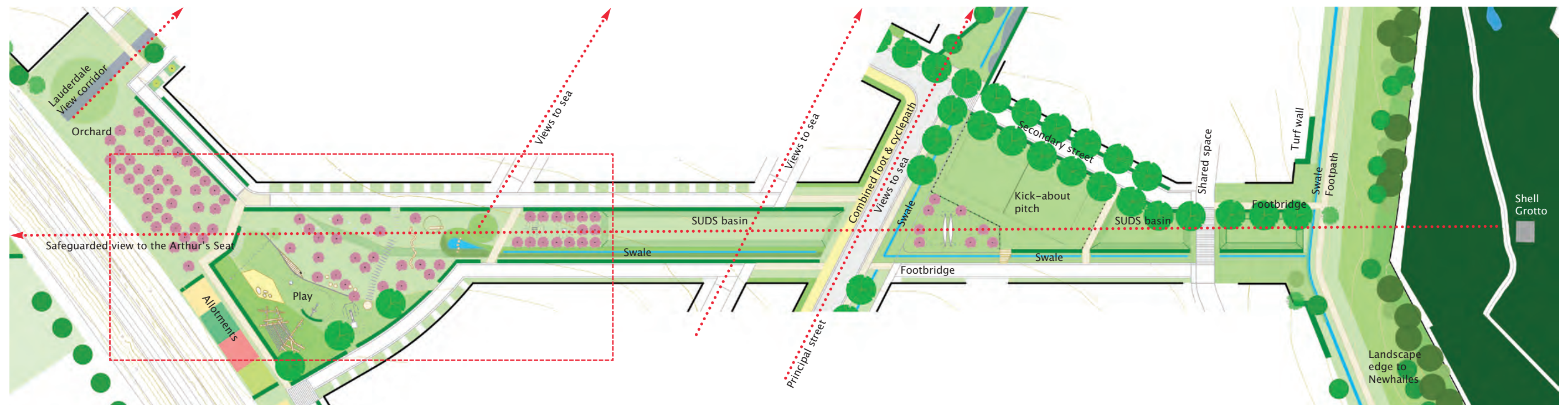
VIEW CORRIDOR FROM SHELL GROTTO WITHIN NEWHAILES



SHELL GROTTO WITHIN NEWHAILES

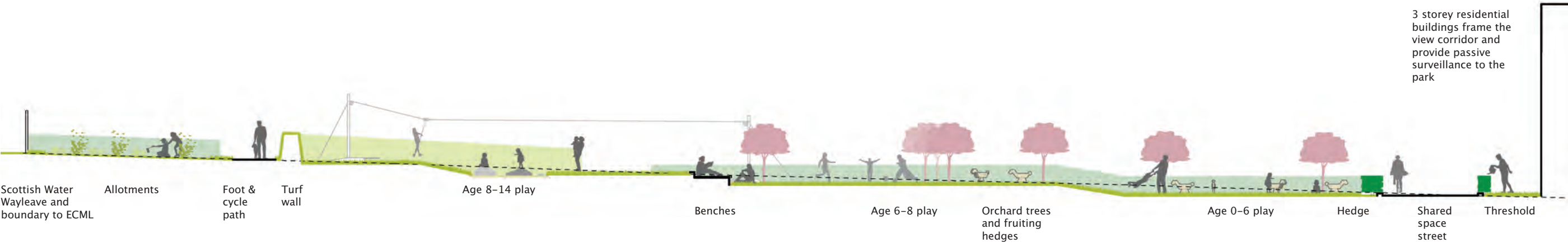


CONCEPT DIAGRAM: ARTHUR'S SEAT VIEW FROM SHELL GROTTO

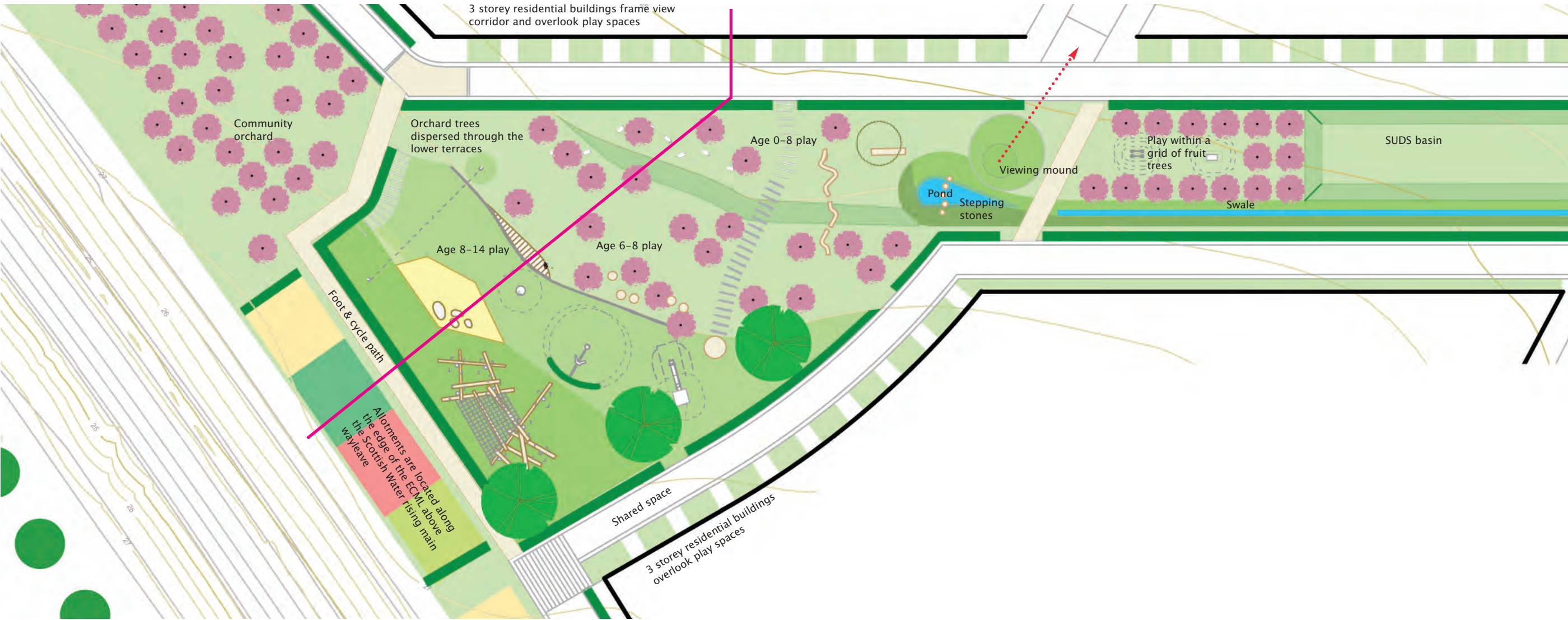


LINEAR PARK PLAN

linear park play



SECTION 4.2E_SECTION THROUGH PLAY PARK

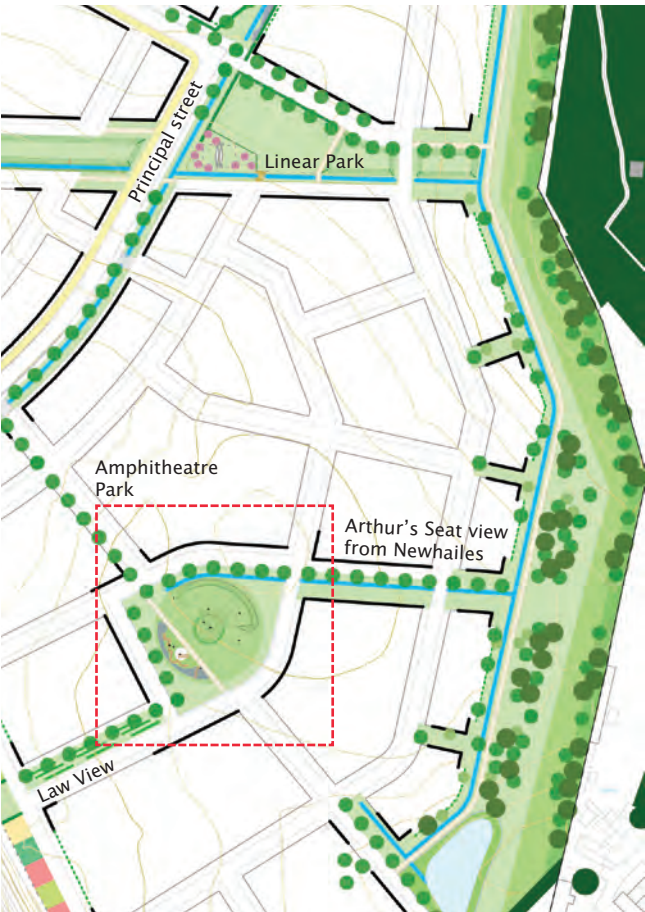
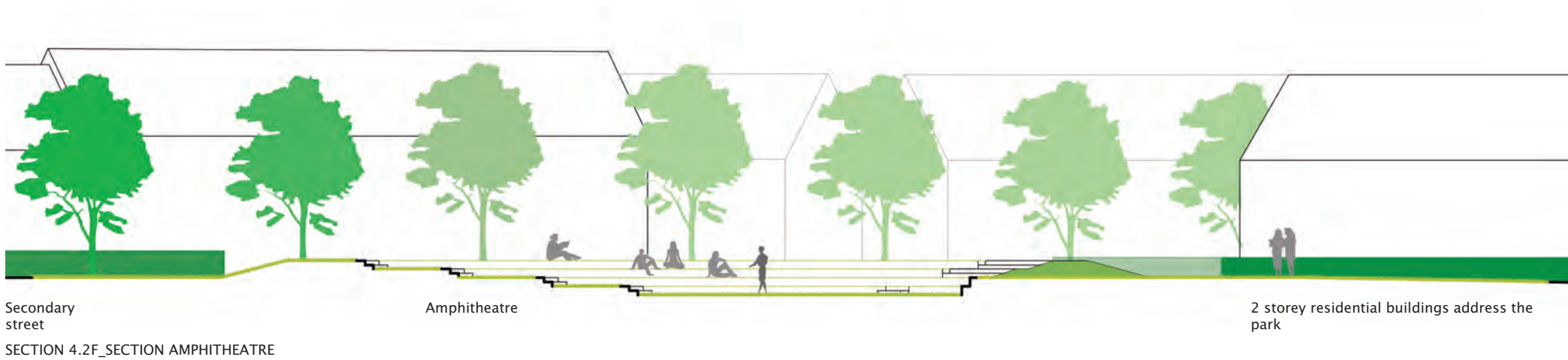


PLAY PARK DETAIL PLAN

amphitheatre park

A park is proposed at the intersection of two view corridors – North Berwick Law and Newhailes to Arthur’s Seat.

The space may include a gentle grass banked amphitheatre which functions as an informal seating and play area as well as a outdoor performance space.



AMPHITHEATRE PARK PLAN

4.3 landscape edges

This subsection describes characteristics of the proposed of the four landscape edges of the site:

- › Edge to Brunstane Burn Valley
- › Edge to Newhailes
- › Edge to Wanton Walls
- › Edge to Newcraighall North



KEY PLAN: LANDSCAPE EDGES

landscape edge to burnstane burn valley

The character of the burnside landscape is extended into the site along the northern boundary.

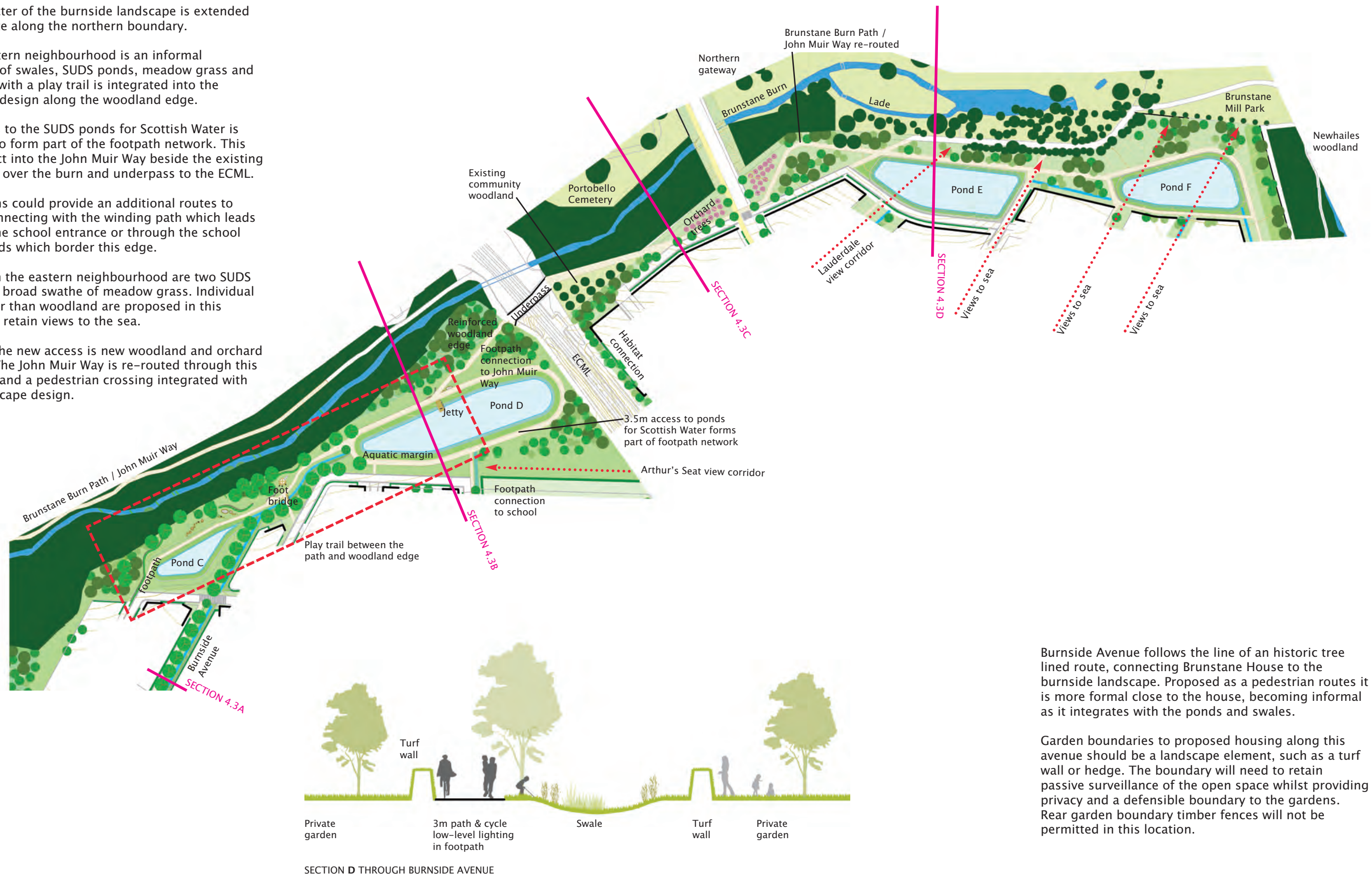
In the western neighbourhood is an informal landscape of swales, SUDS ponds, meadow grass and woodland with a play trail is integrated into the landscape design along the woodland edge.

The access to the SUDS ponds for Scottish Water is designed to form part of the footpath network. This will connect into the John Muir Way beside the existing footbridge over the burn and underpass to the ECML.

These paths could provide an additional routes to school, connecting with the winding path which leads south to the school entrance or through the school paying fields which border this edge.

Similarly in the eastern neighbourhood are two SUDS ponds in a broad swathe of meadow grass. Individual trees rather than woodland are proposed in this location to retain views to the sea.

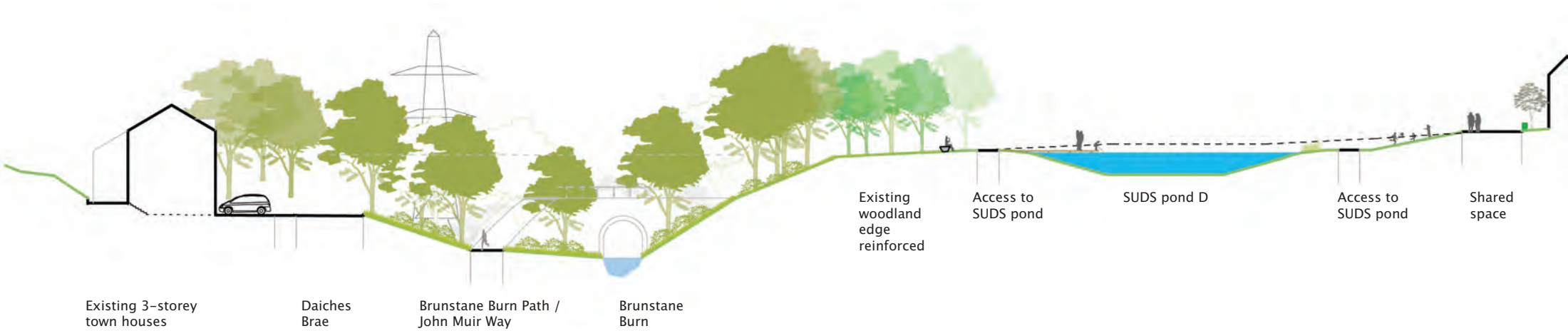
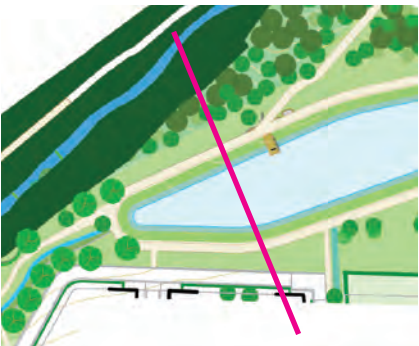
Closer to the new access is new woodland and orchard planting. The John Muir Way is re-routed through this landscape and a pedestrian crossing integrated with the streetscape design.



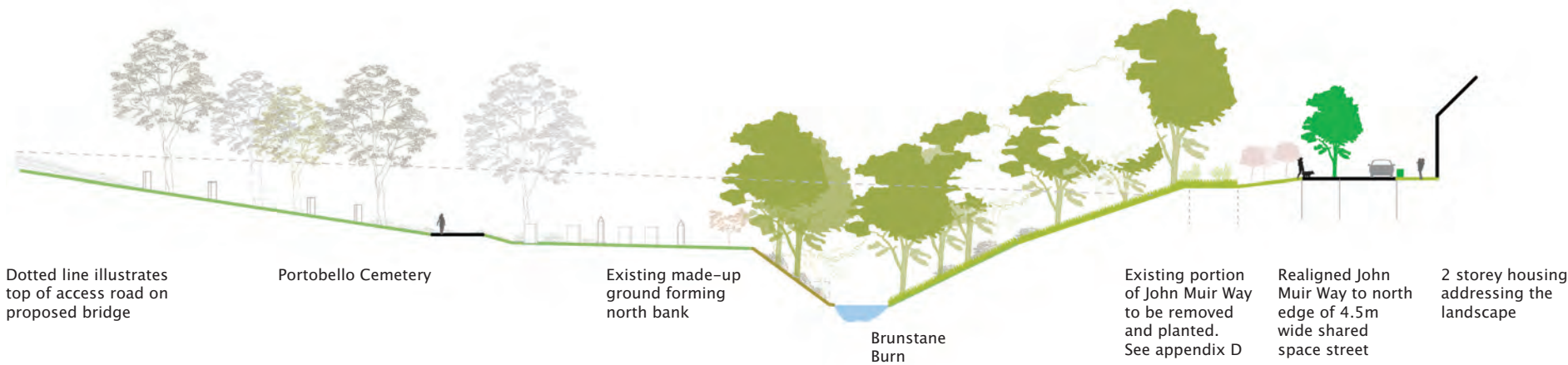
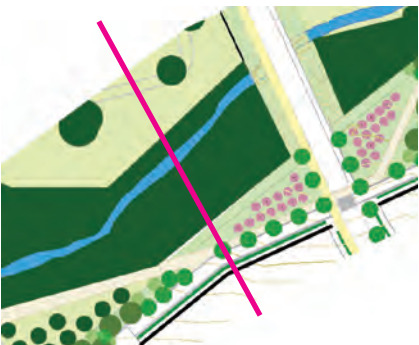
Burnside Avenue follows the line of an historic tree lined route, connecting Brunstane House to the burnside landscape. Proposed as a pedestrian routes it is more formal close to the house, becoming informal as it integrates with the ponds and swales.

Garden boundaries to proposed housing along this avenue should be a landscape element, such as a turf wall or hedge. The boundary will need to retain passive surveillance of the open space whilst providing privacy and a defensible boundary to the gardens. Rear garden boundary timber fences will not be permitted in this location.

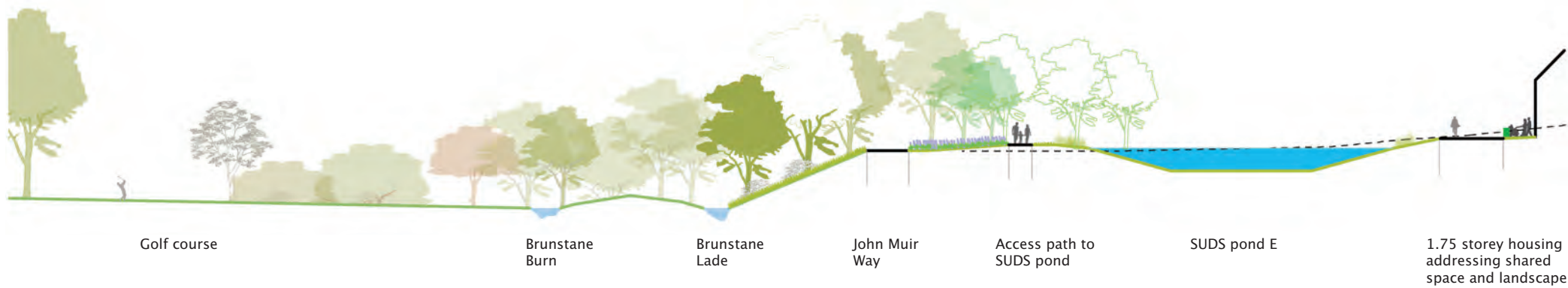
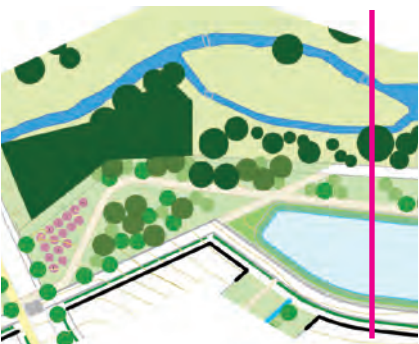
SECTION 4.3B_SECTION THROUGH BRUNSTANE BURN VALLEY
[WEST FIELD]



SECTION 4.3C_SECTION THROUGH BRUNSTANE BURN
[EAST FIELD]



SECTION 4.3D_ SECTION THROUGH BRUNSTANE BURN
[EAST FIELD]



landscape edge to newhailes

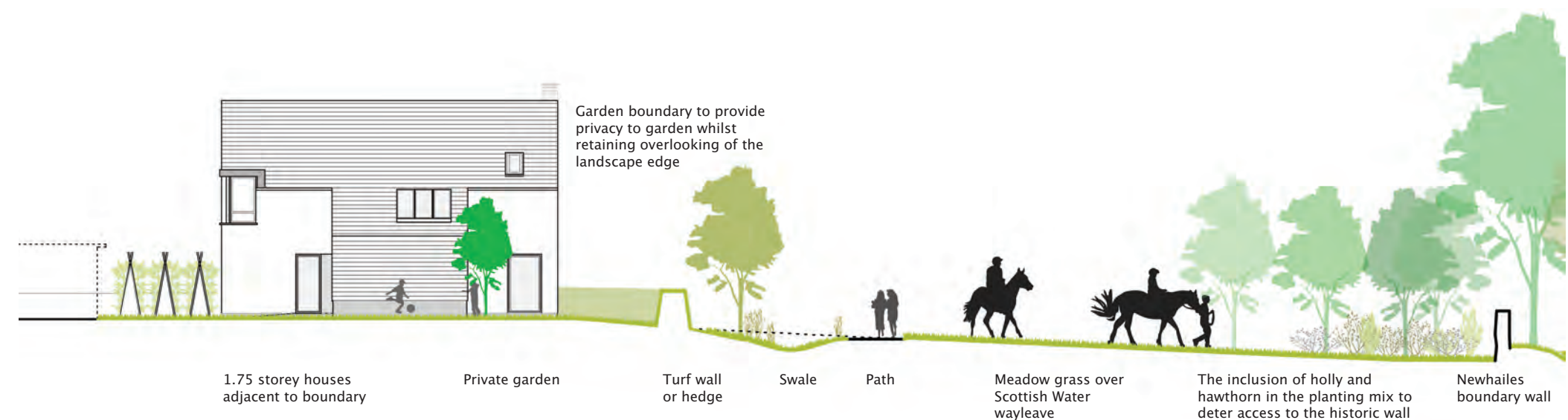
The landscape edge alongside Newhailes creates a distinction between new housing and the historic boundary wall to Newhailes. The width of the landscape space varies 29m to 47.5m depending on the extent of woodland within Newhailes. Fingers of landscape will also interconnect with the housing along this edge.

This buffer includes meadow grassland, mown grass, shrubs, tree planting, footpaths swales and a SUDS pond.

The National Trust for Scotland, who manage Newhailes, are concerned that the historic boundary wall is vulnerable to vandalism and that the landscape design should aim to discourage access to the wall. The masterplan proposes the inclusion of 'spiky' planting close to the wall such as holly which is the traditional boundary treatment within Newhailes Estate.

The future detail design of this space will involve dialogue with CEC, Historic Environment Scotland, the National Trust for Scotland and Scottish Natural Heritage on the use of the space and appropriate planting.

Garden boundaries to proposed housing along this edge will be a landscape element, such as a turf wall or hedge in combination with a swale. The boundary will need to retain passive surveillance of the open space whilst providing privacy and a defensible boundary to the gardens. Rear garden boundary timber fences will not be permitted in these locations.



SECTION 4.3E_SECTION THROUGH LANDSCAPE EDGE TO NEWHAILES



SECTION 4.3F_SECTION THROUGH ARTHUR'S SEAT VIEW CORRIDOR FROM NEWHAILES HOUSE

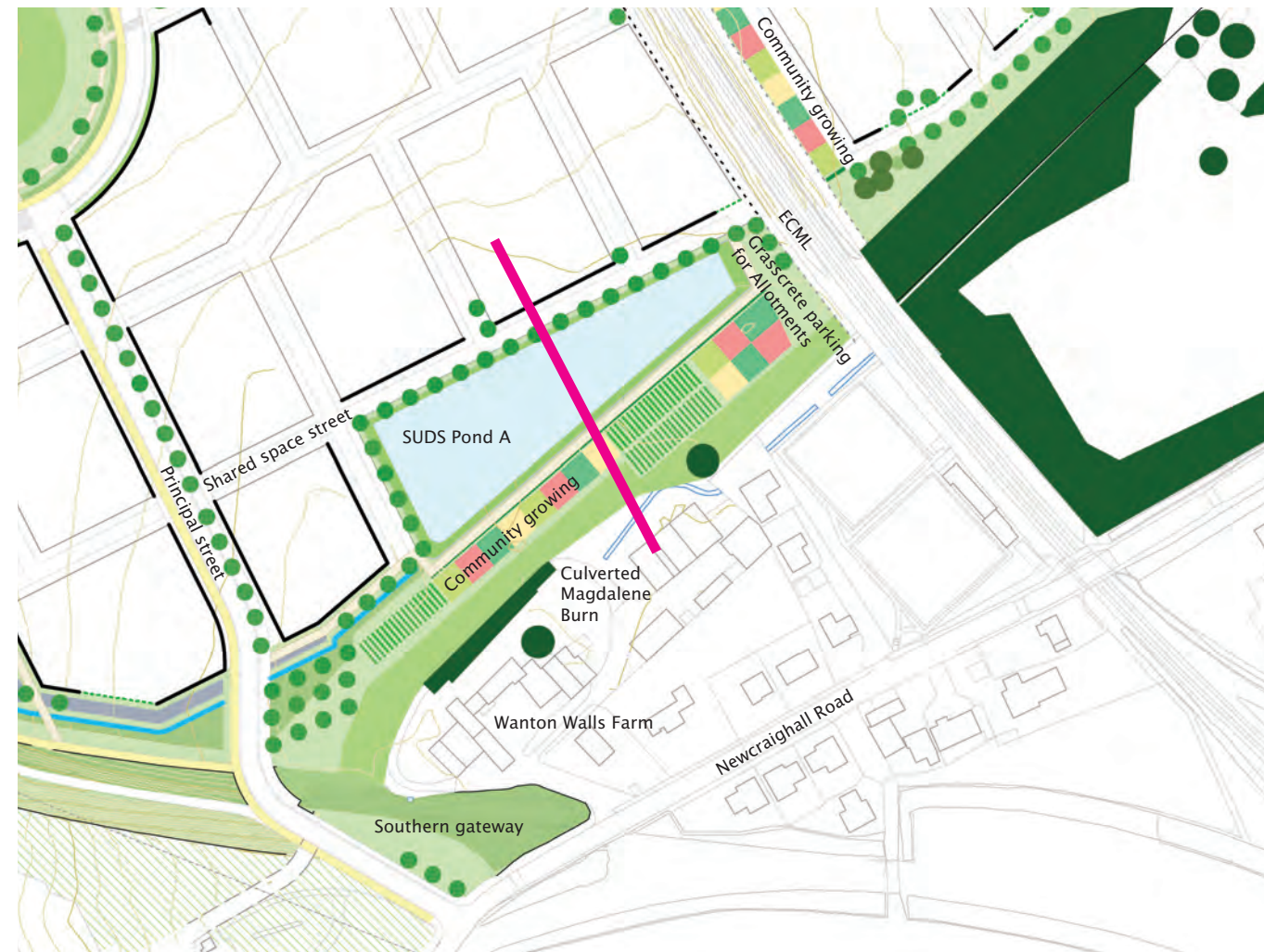
landscape edge to wanton walls

The existing boundary to Wanton Walls is fragmented and varied in character. There are also several utility wayleaves along this edge. The proposed landscape edge treatment aims to repair the fragmentation.

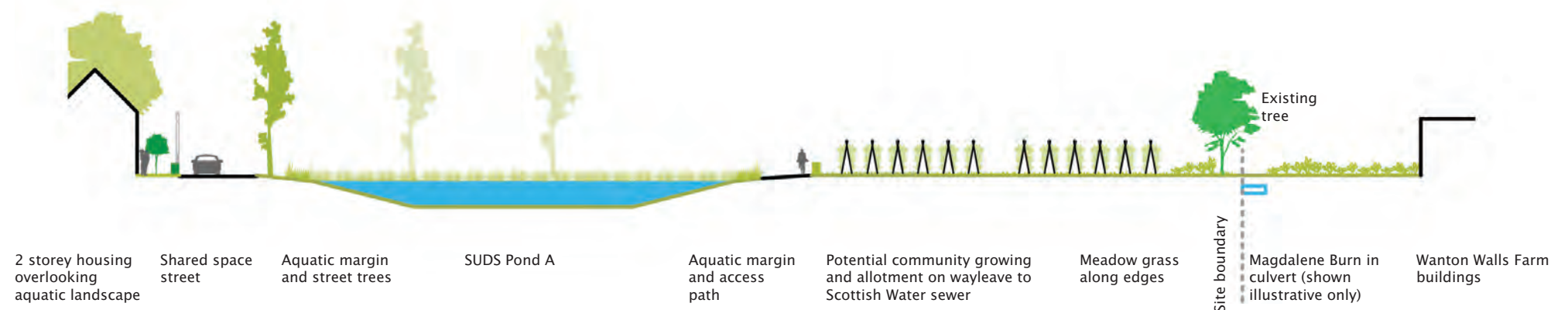
A SUDS pond is located beyond the wayleave. South of the pond is an area for community growing which would include allotments, fruiting hedges and where the wayleaves permit orchards.

The surrounding housing will be designed to overlook the pond and ensure adequate passive surveillance.

All access paths surrounding SUDS ponds are required by Scottish Water to be 3.5m wide for occasional maintenance vehicles. In order to minimise the visual impact of the path and avoid duplication of hard surfaces, it is proposed that this width comprises a 2m hard surfaced footpath with an adjoining 1.5m grasscrete surface.



EDGE LANDSCAPE TO WANTON WALLS



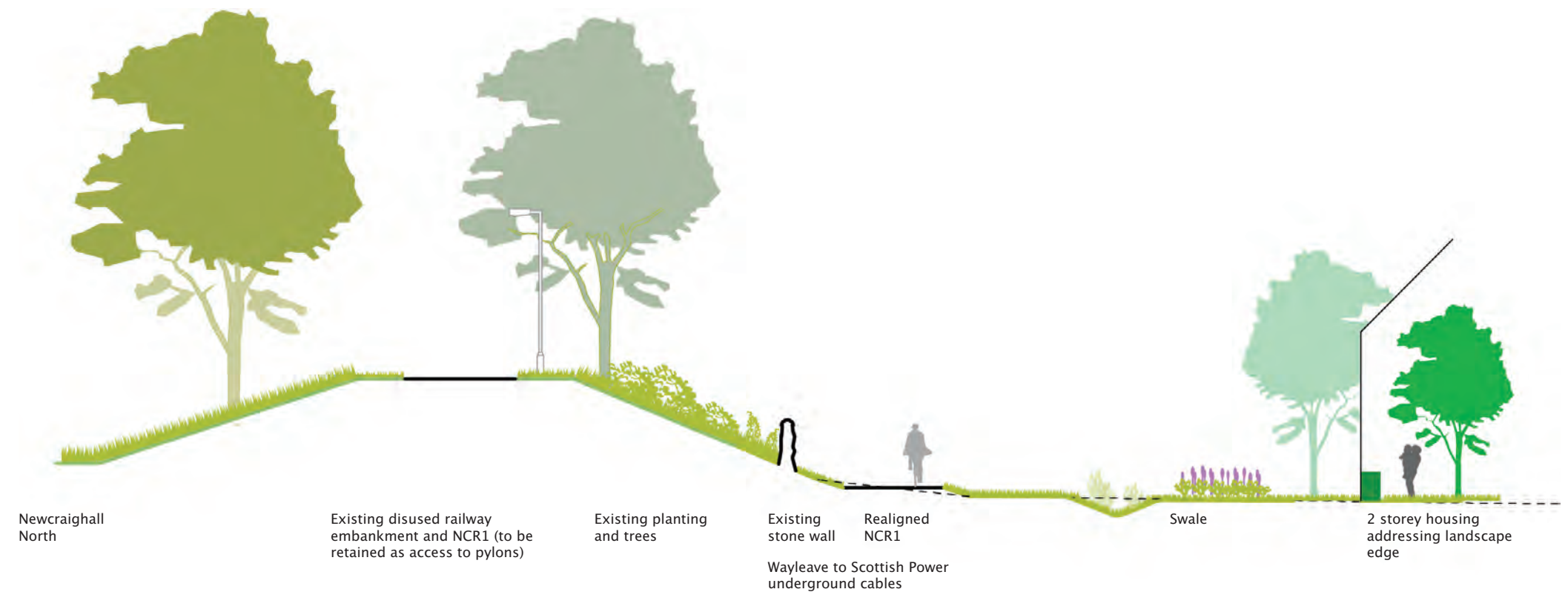
SECTION 4.3_SECTION THROUGH SUDS POND A AND LANDSCAPE EDGE TO WANTON WALLS

landscape edge to newcraighall north

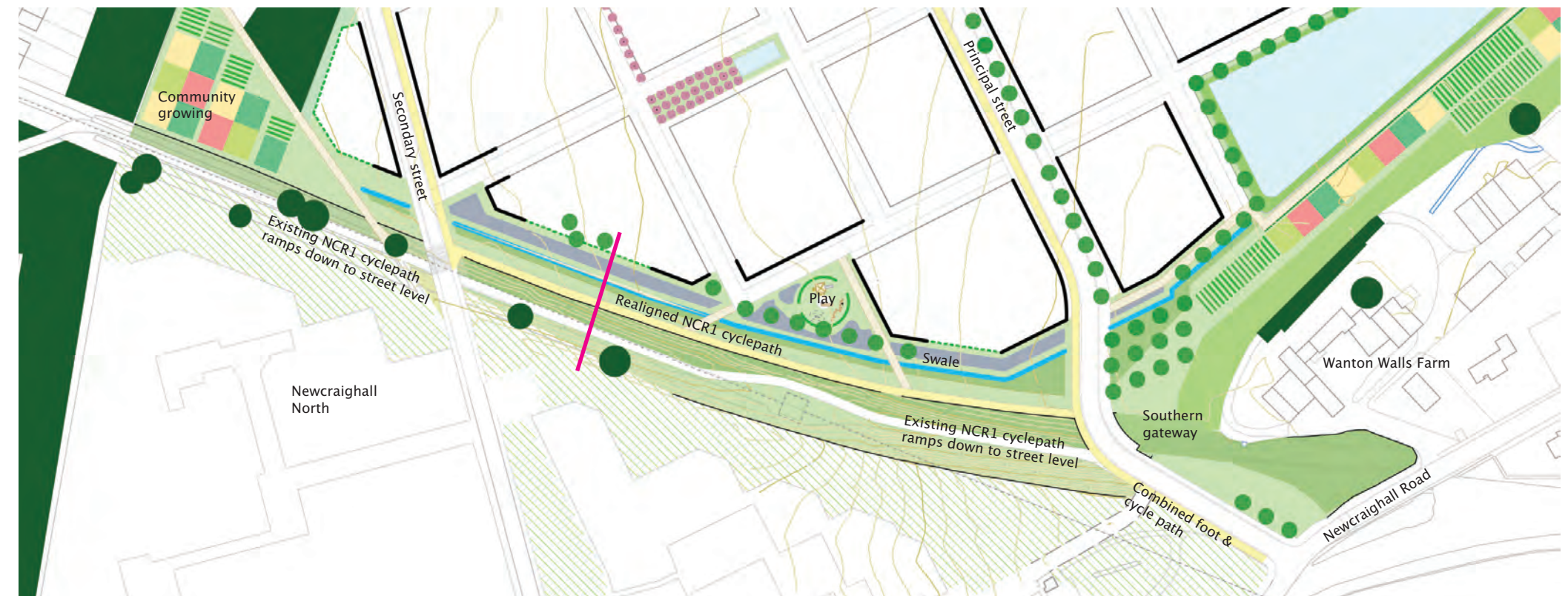
To the south-west the existing site boundary is NCR1, on the former railway embankment. Pylons and the associated wayleave follow this route. South of this is new development at Newcraighall North.

A proposed secondary access runs through Newcraighall North into the south west corner of the New Brunstane site. In order to form this access the existing embankment and path will need to ramp down to street level.

Rather than the cycle route ramping back up as it continues east the masterplan proposes an additional foot and cycle route to the north of the existing stone wall. This will run within a landscape buffer alongside a swale. A local play area is included in this buffer and to the west, closest to the existing residential areas, an area of community growing.



SECTION 4.3G_SECTION THROUGH LANDSCAPE BOUNDARY TO NCR1 EMBANKMENT



SOUTHERN BOUNDARY WITH NEWCRAIGHALL NORTH

4.4 residential streets

The masterplan proposes close knit residential streets to form a safe and attractive environment. The streets will have a varying but distinctive character depending on their location within the masterplan. Key urban design principles apply throughout the shared spaces.

Street Design Principles

- › Streets aligned to fit with existing topography and landscape features.
- › Development of a fine grain of interconnected shared space streets to prioritise walking and cycling and create a sheltered micro-climate.
- › Streets and public open spaces are designed to be well overlooked in order to be safe, attractive and well used. Secured by Design principles to be followed.
- › Building elevations, garden walls and hedges designed as a single composition to increase enclosure and strengthen placemaking.
- › Narrow front garden threshold spaces with close proximity of front doors to the street to encourage neighbourliness and the passive surveillance of activity within the street.
- › Maximum height to width enclosure ratio 1:3.
- › Where the builtform overlooks landscape or open space a consistent frontage and boundary treatment should be considered.
- › A coherent language and simple palette of materials to unify the streetscape and landscape design with the architecture.
- › At junctions with principal and secondary streets the surface material should be designed to mark the transition into the shared space.
- › Incidental narrowing of the carriageway to reduce vehicle speeds using street trees or street furniture; and the positioning of builtform.
- › Integration of SUDS and swales within streetscape.
- › Management and maintenance of streets, spaces and parks will be carefully planned at each stage of the design process.
- › Principles of Designing Places, Designing Streets policy and The National Roads Development Guide to be followed.
- › Car parking in general should be designed to be discreet with a minimum of front curtilage parking.
- › On-street parking, where provided, should be designed as an integral part of the streetscape.
- › Services should be within designated areas within the shared space carriageway.

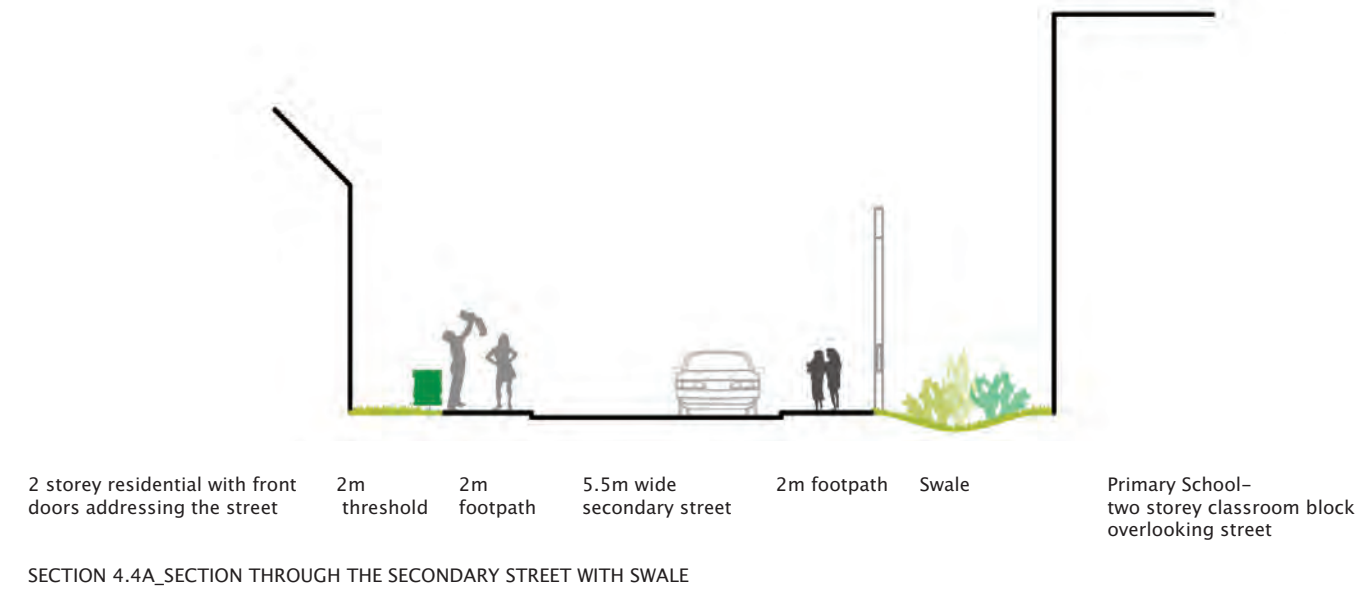


secondary streets

A secondary street runs from the access at Newcraighall North towards Brunstane Park. This includes a 5.5m segregated carriageway, a 2m pavement and a 3m combined foot and cycle route.

A similar secondary street forms a loop in the eastern field.

The street sections illustrate the two contrasting characters of secondary street. SUDS swales can be integrated within the street.



Parking

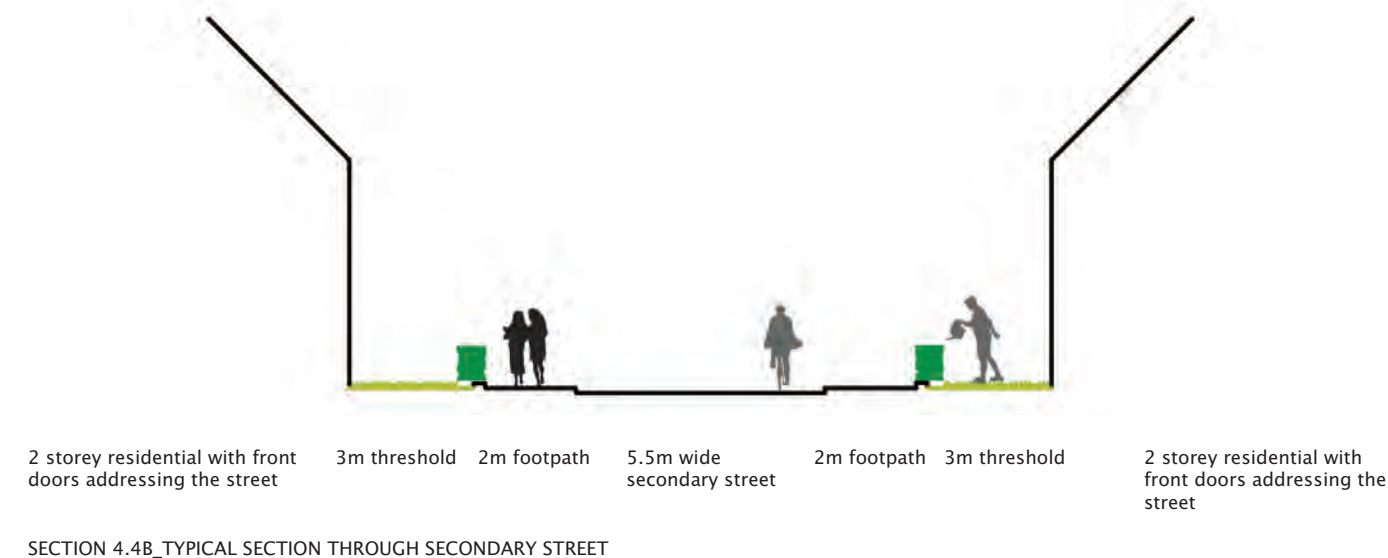
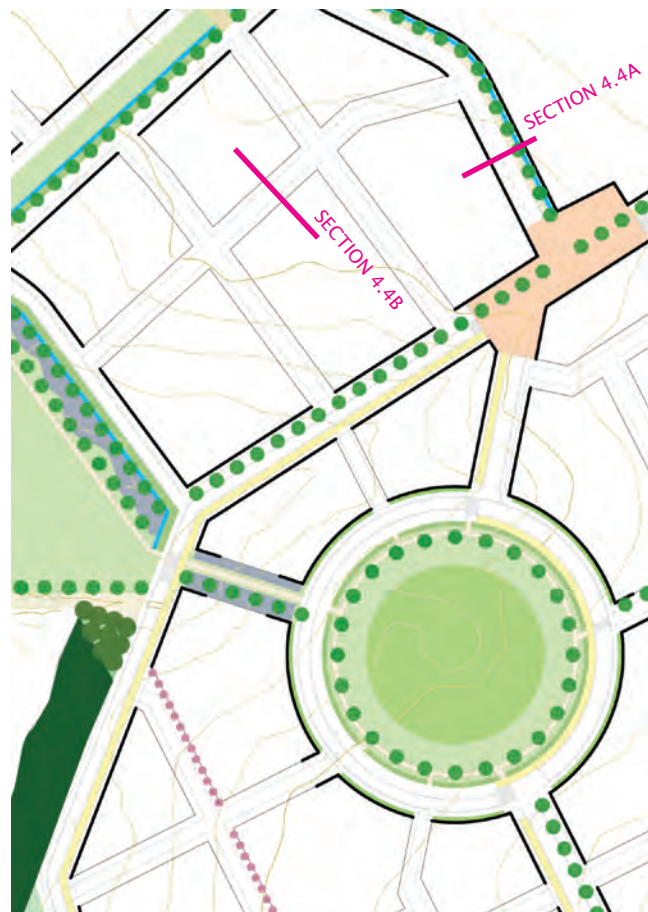
Car parking integral to the design of streets and public realm should be provided in accordance with both local and national parking standards. This will include the provision of visitor parking, disabled access and loading requirements.

In curtilage parking for residential properties will be designed to be discreet so as not to dominate the streetscape.

- › Discreet car parking is integrated with the streetscape design and architecture.
- › Parking formats include on-street, in-curtilage within pends, in courtyards, in mews streets or undercroft (where levels permit).
- › Frontage parking in 6m driveways should be avoided.
- › On street parking will tend toward the north facing shady sides of streets.
- › Secure cycle parking will be provided at key locations throughout the masterplan.

Accessibility

One of the principles for the masterplan is to create a place offering barrier-free access to people with a disability. Apart from the need for dropped kerbs at road crossings there should be no need for special measures to achieve at-grade access to all buildings.



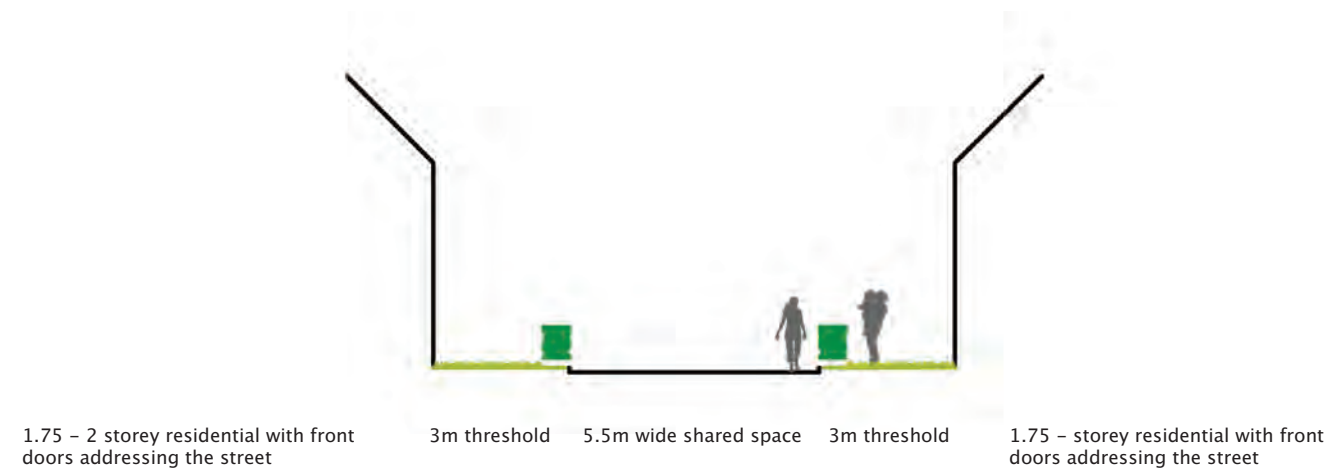
shared space streets

A network of shared space streets that respond to the natural topography and integrate with the landscape framework.

These types of pedestrian friendly street already exist in many historic towns in Scotland. They are intimate in scale with minimal private front gardens, encouraging meeting and greeting. The scale and proximity to activity creating a naturally traffic calmed environment.

Character varies from the higher density urban streets with terraced format housing and on-street parking to the lower density rural streets where houses are integrated with landscape.

Shared spaces vary in width from 4m to 5.5m depending on the location in the masterplan.



SECTION 4.4C_TYPICAL SECTION THROUGH A TYPICAL SHARED SPACE



TYPICAL RESIDENTIAL STREETS





3 storey residential frontage to provide enclosure.

Large windows overlook the public realm, to bring activity and passive surveillance.

In-curtilage carports allow frontages to be close to the street.

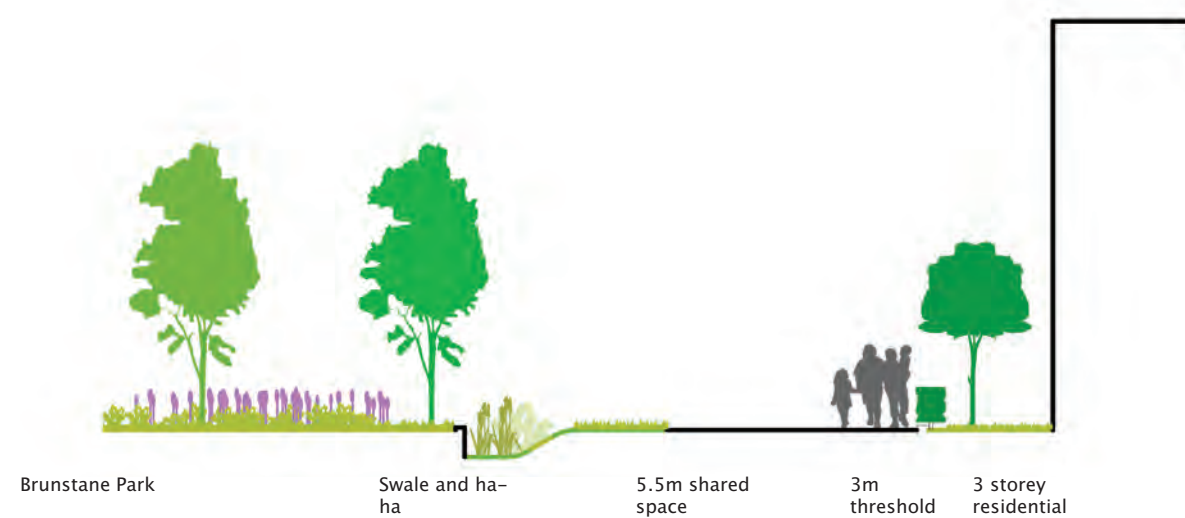
Front doors open onto minimal private front gardens

3m threshold

4.5m shared space

Ha-ha edge to the swale

SECTION 4.4D_SECTION THROUGH SHARED SPACE ALONG LAUDERDALE VIEW



Brunstane Park

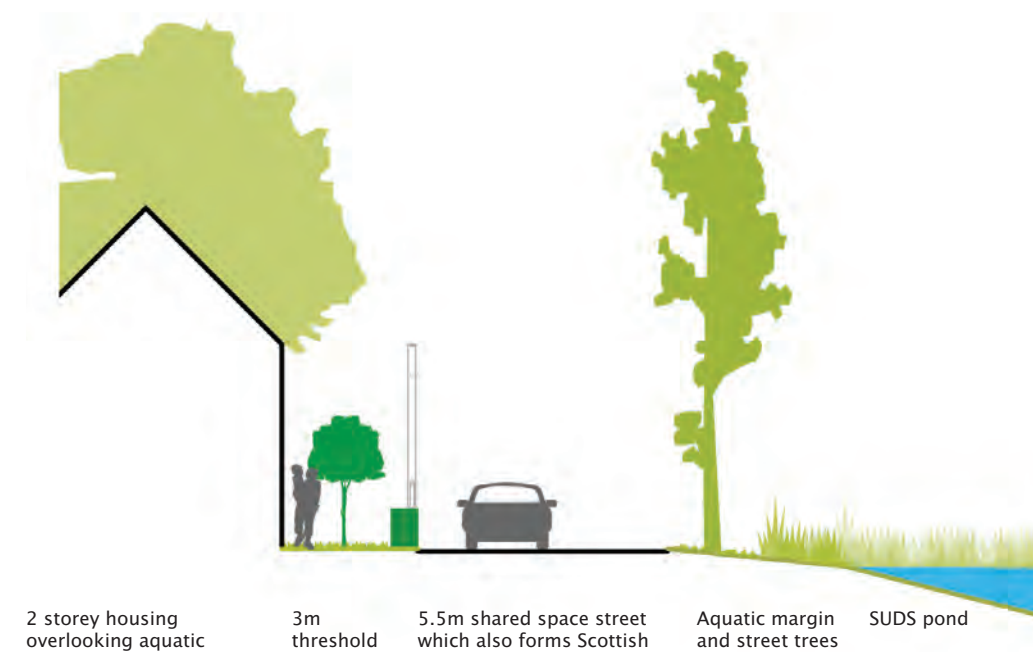
Swale and ha-ha

5.5m shared space

3m threshold

3 storey residential

SECTION 4.4E_DETAIL SECTION THROUGH BRUNSTANE AVENUE SHARED SPACE



2 storey housing overlooking aquatic landscape

3m threshold

5.5m shared space street which also forms Scottish Water access to SUDS pond

Aquatic margin and street trees

SUDS pond

SECTION 4.4F_SECTION THROUGH SHARED SPACE BESIDE SUDS POND

5 urban design code

Purpose

The Urban Design Code sets out the expectations for the design of New Brunstane. The code defines:

- › The frontage lines and spatial proportion
- › Threshold spaces
- › Boundary treatment
- › Streetscape and public realm
- › Landscape

These key inter-relationships govern the integrity of the streets and spaces. The code is structured as follows:

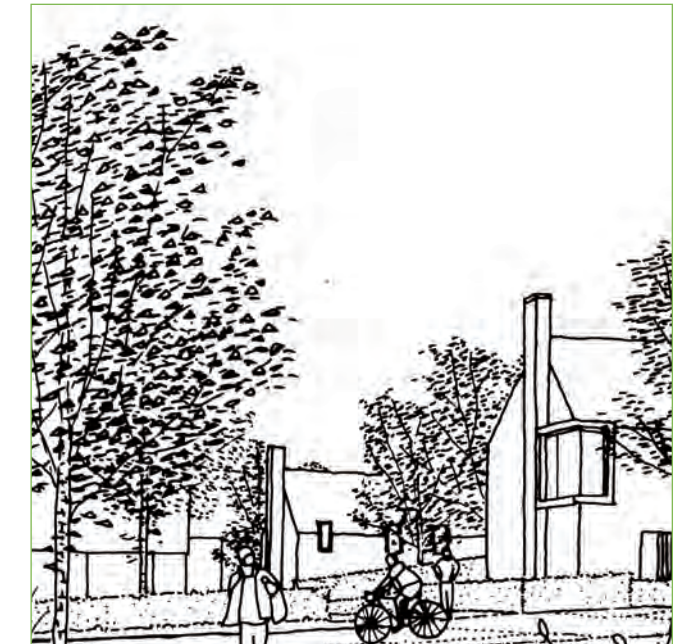
Coding Plans

- 5.1 West Field
- 5.2 East Field

Coding Sections

- 5.3 Urban Frontage
- 5.4 Park Frontage
- 5.5 Framed View
- 5.6 Landscape Edge
- 5.7 Newhailes Edge
- 5.8 Residential Street Coding
- 5.9 View Corridor Safeguards

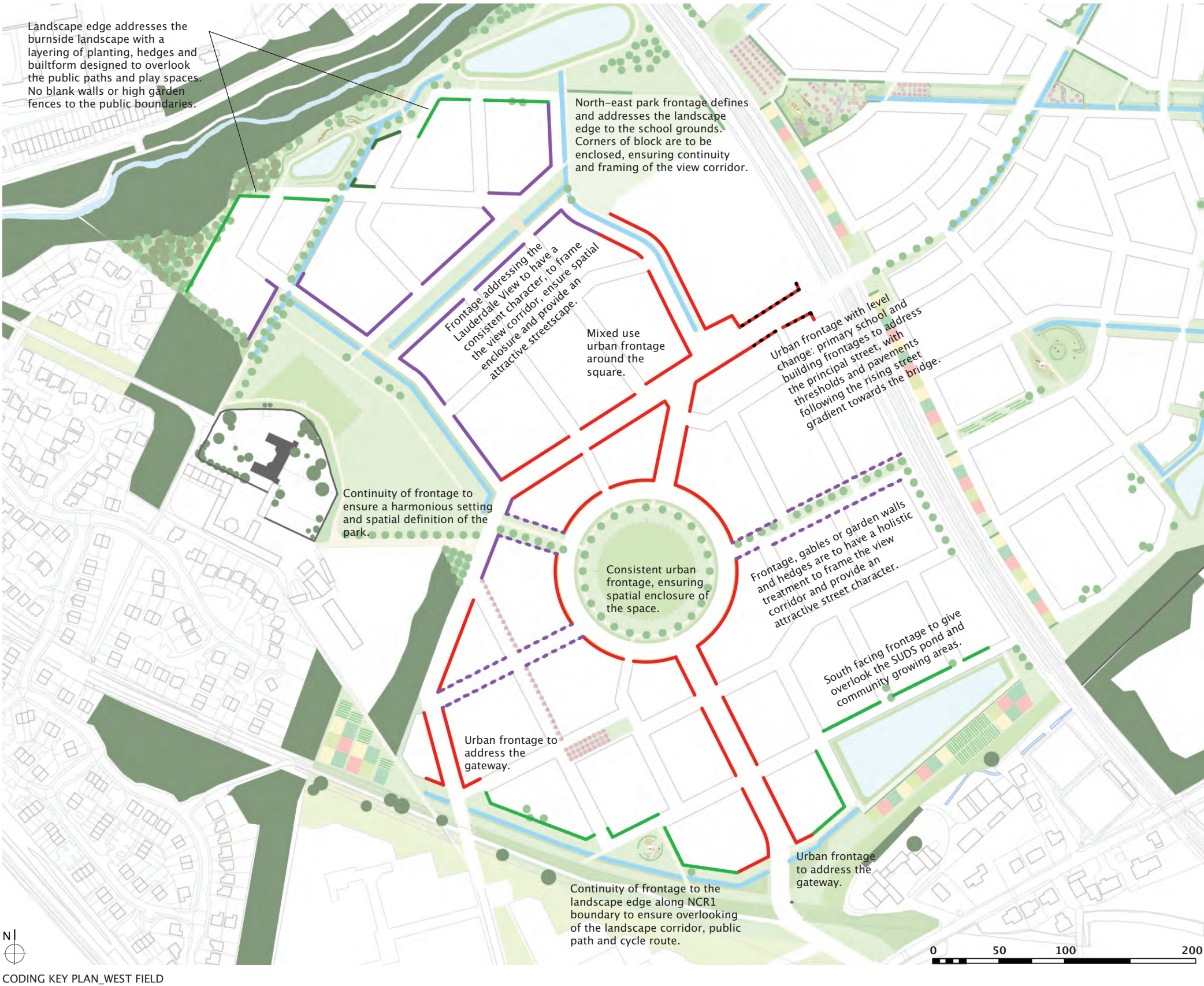
The codes are not intended as a detailed prescription for the architecture or streetscape design since neither of these elements can be fully designed or approved at PPP stage. The dimensions shown in the code (with the exception of frontage lines) are indicative rather than prescriptive. Generally roof profiles are shown as indicative in the coding sections.



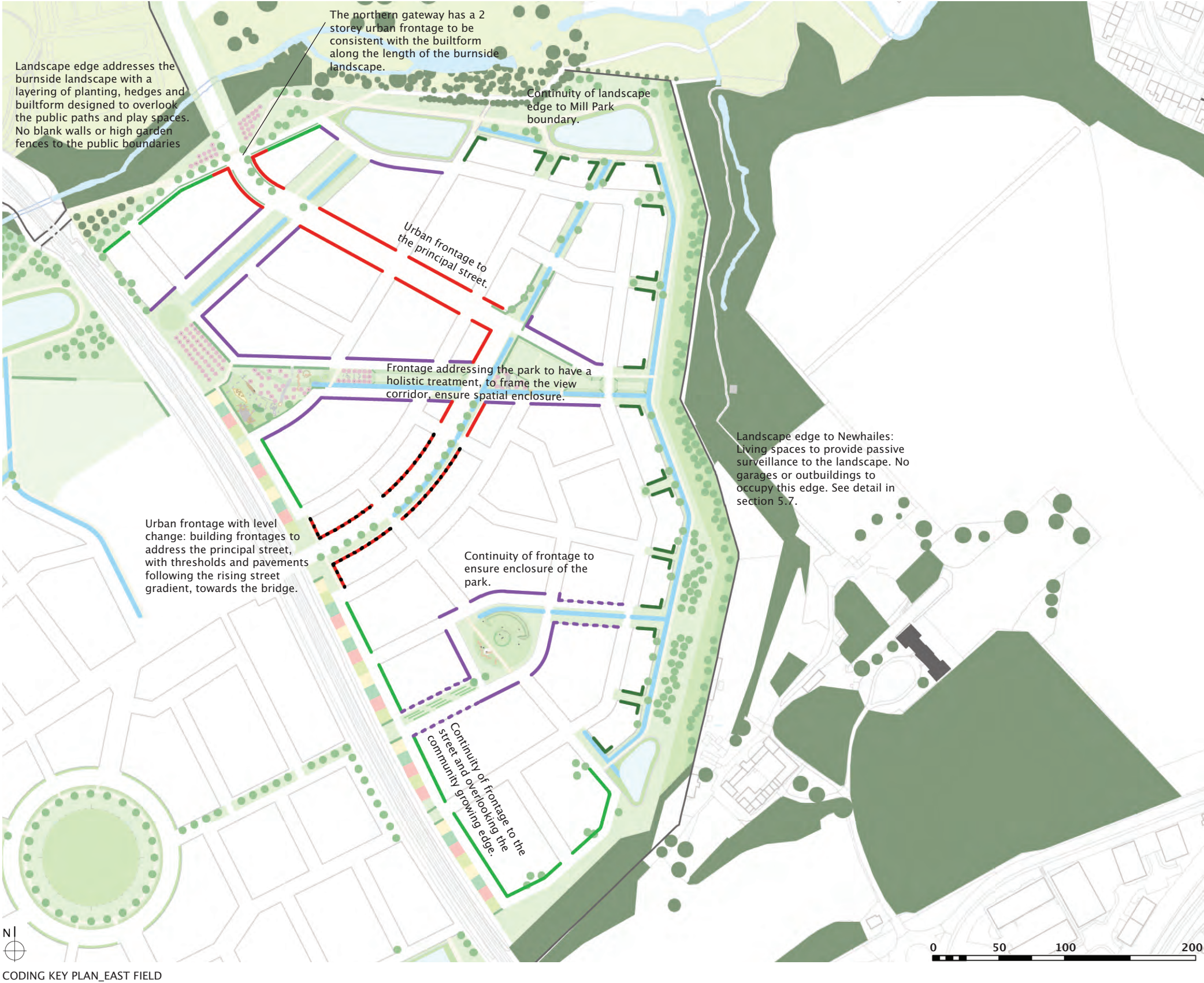
5.1 coding plan_west field

Coding Plans

The key plans for the west and east fields set out the location of frontages prescribed by the code. These show the character of builtform and the extent to which it will address the various streets and spaces defined by the code.



5.2 coding plan_east field



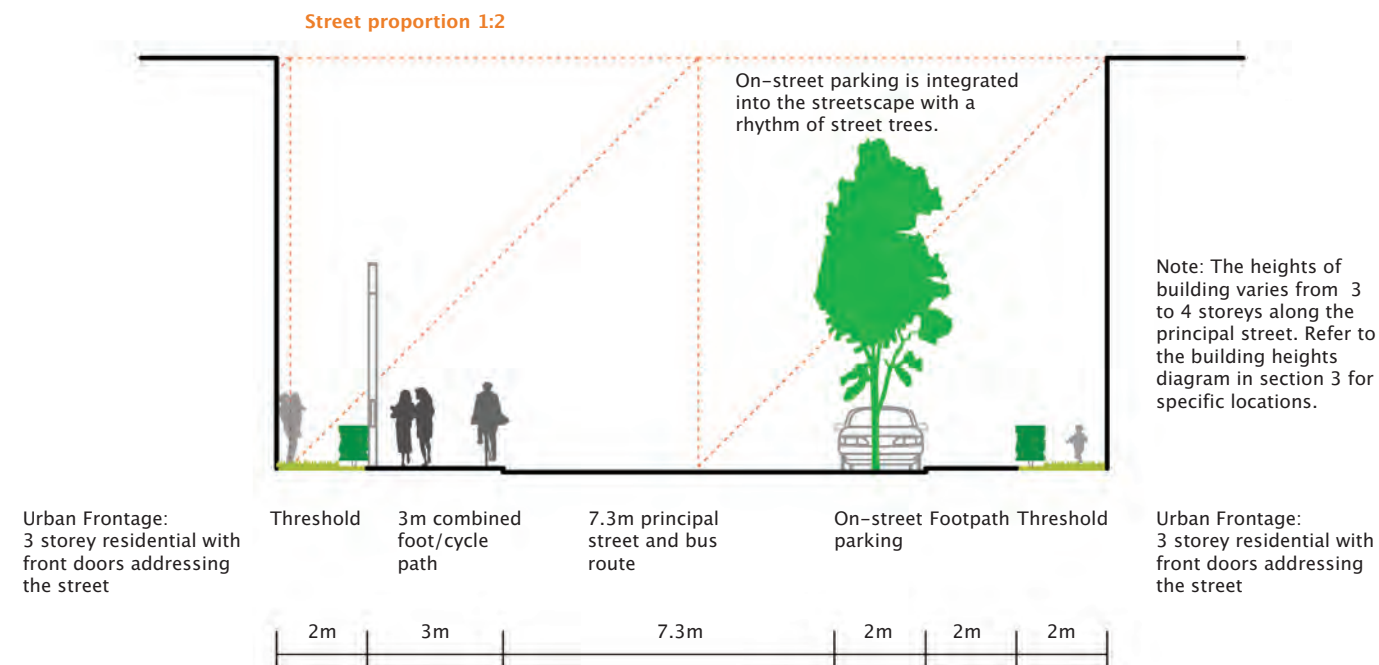
5.3 urban frontage

Urban Frontage Design Code

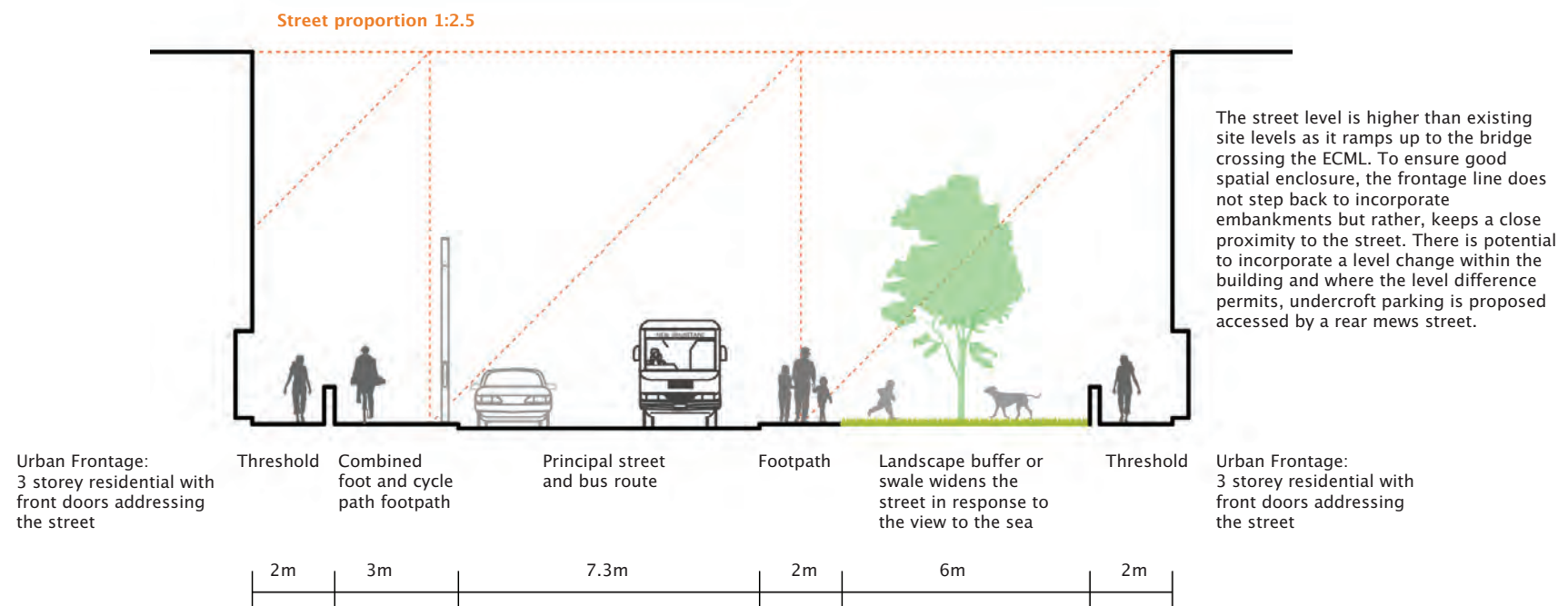
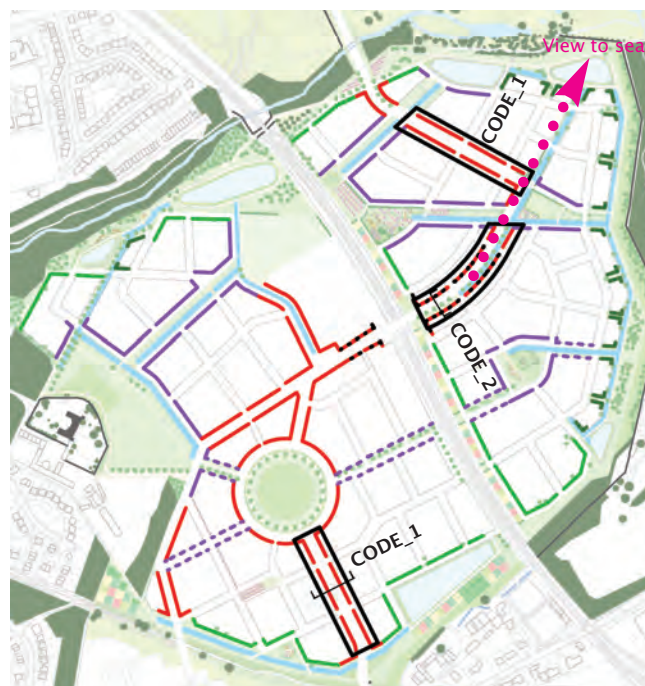
- › Higher density residential to define public spaces.
- › Mixed use buildings at local centre.
- › Street proportions 1:2 to 1:2.5 to ensure spatial enclosure.
- › Joined up builtform to provide a continuous frontage.
- › Narrow threshold spaces; no driveways between frontage and street.
- › Front doors on to street.
- › 3–4 storey, as per heights diagram in section 3
- › Northern gateway is the exception where 2–storey housing addresses the burnside landscape.

Exceptions:

The coding for the frontage along the principal street repeats for the west and east field as shown in Code 1_section. However, where the street comes into line with the view to the sea in the east field, the principal street widens to acknowledge and safeguard this view, as per Code 2_section.



CODE 1_SECTION



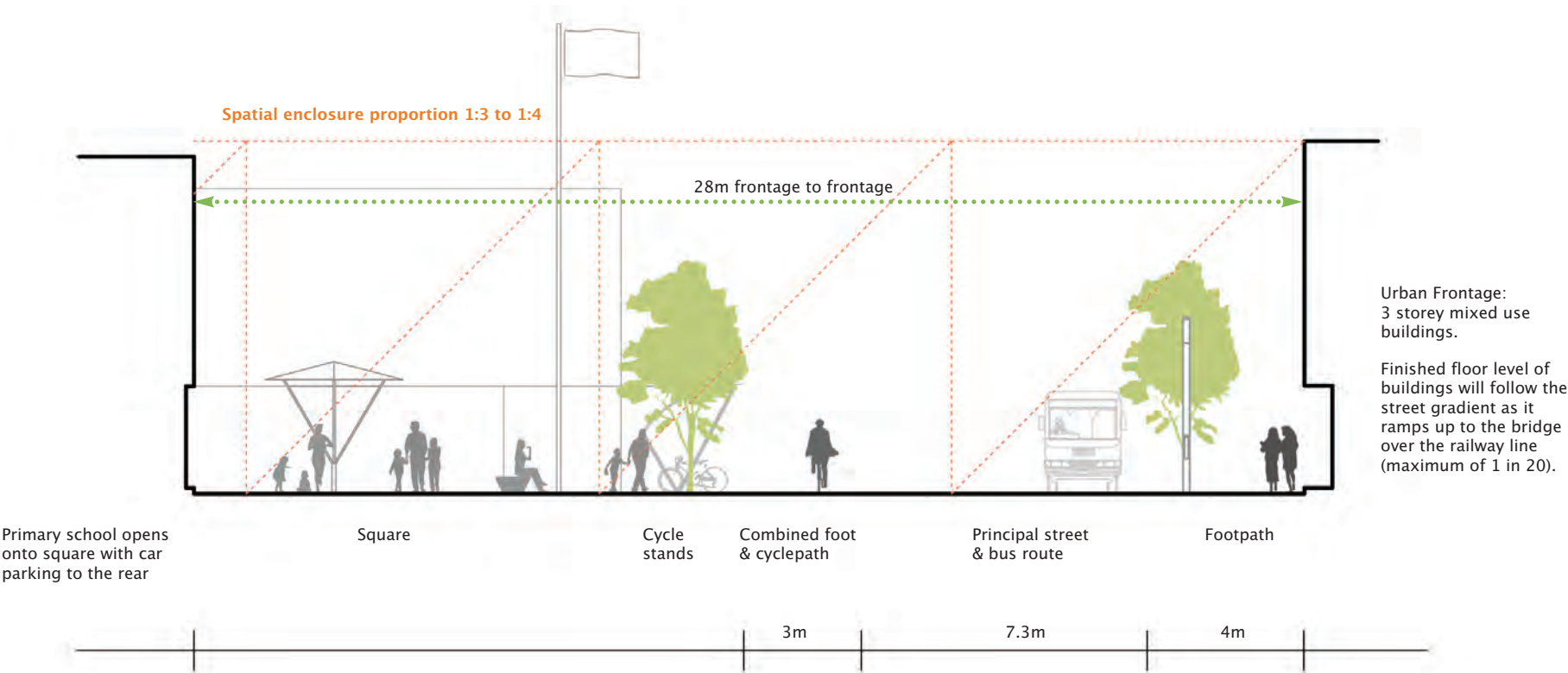
CODE 2_SECTION

Square Design Code

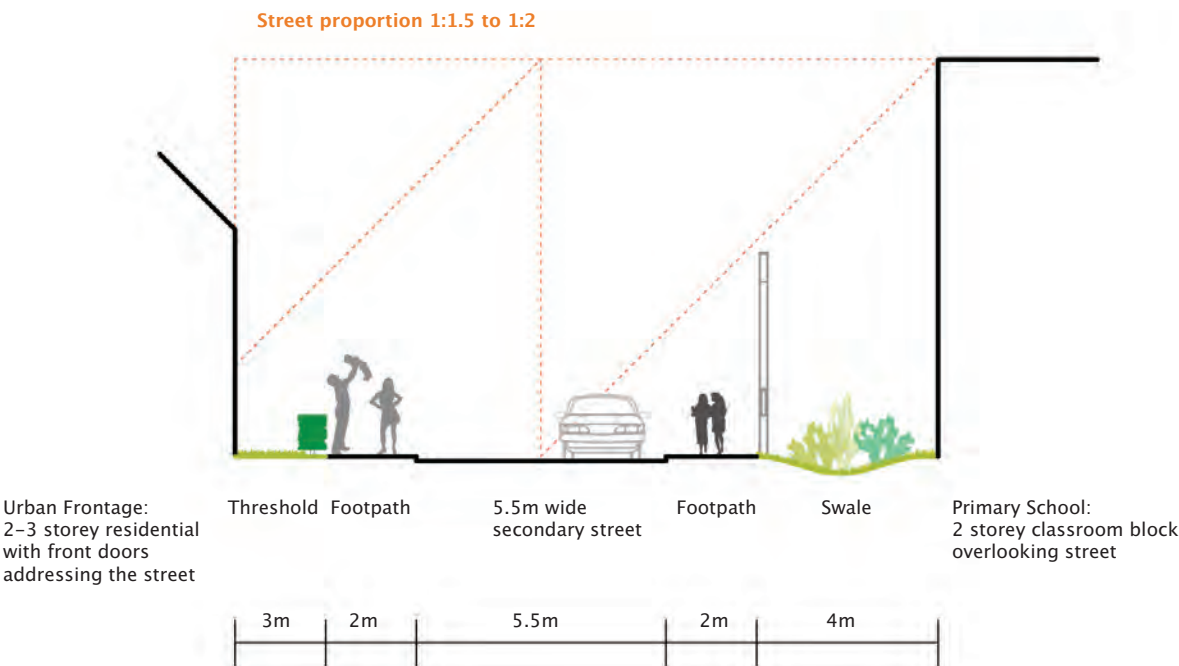
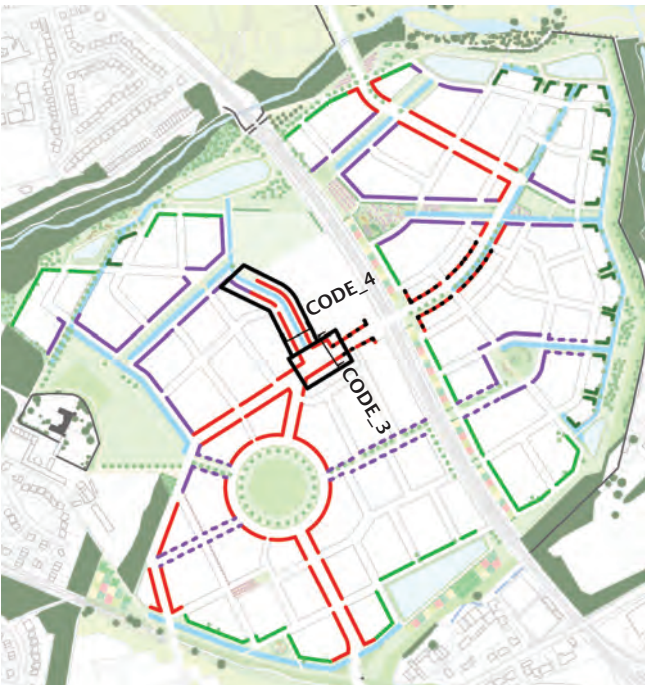
- › A south facing public space at the heart of the community.
- › School and local centre open onto space.
- › Streetscape designed to promote pedestrian priority through use of materials, geometry and streetscape design.

School Frontage Design Code

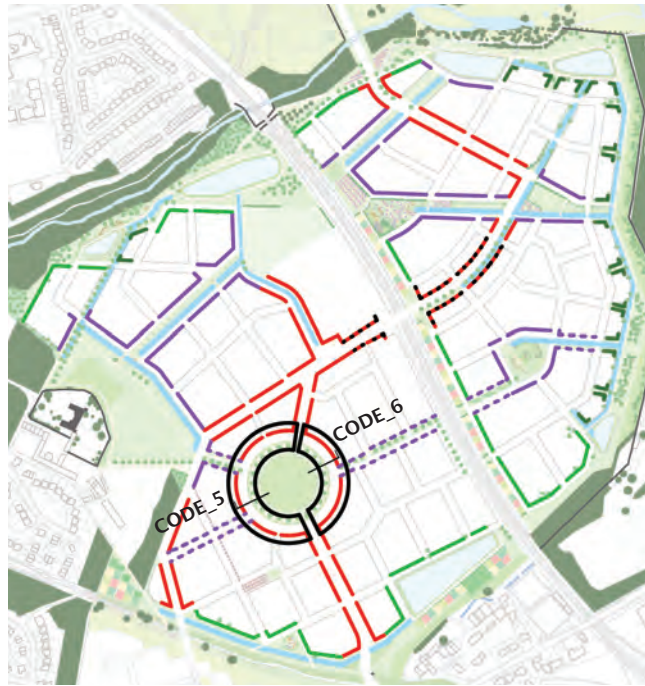
- › Primary school classrooms to overlook secondary street.
- › Swale to act as a defensible boundary to school perimeter.



CODE 3 _SECTION



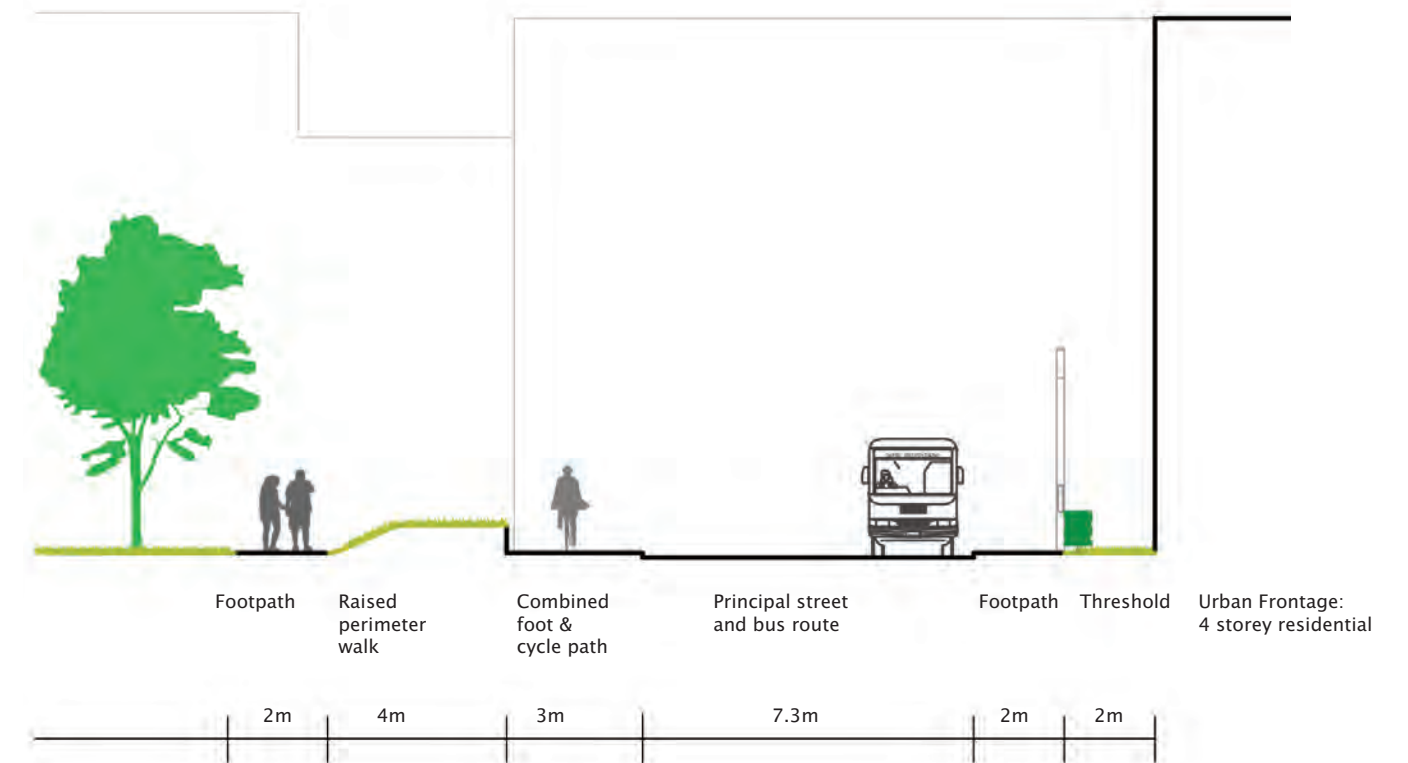
CODE 4_SECTION



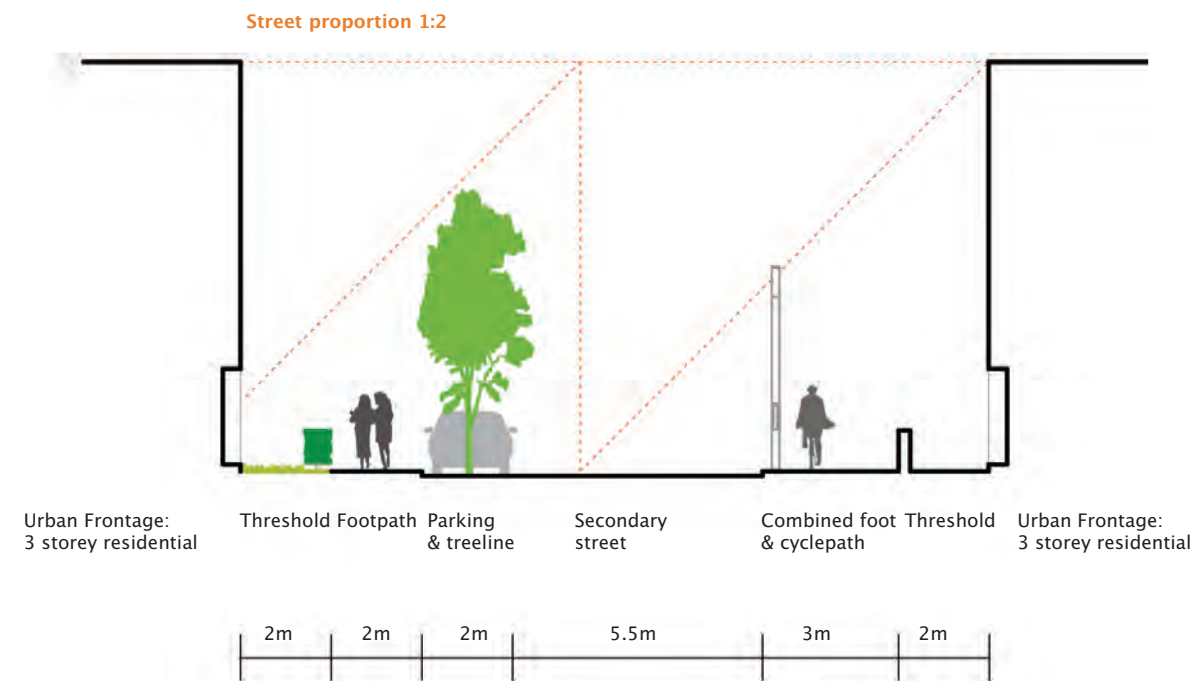
SECTION THROUGH BRUNSTANE GREEN



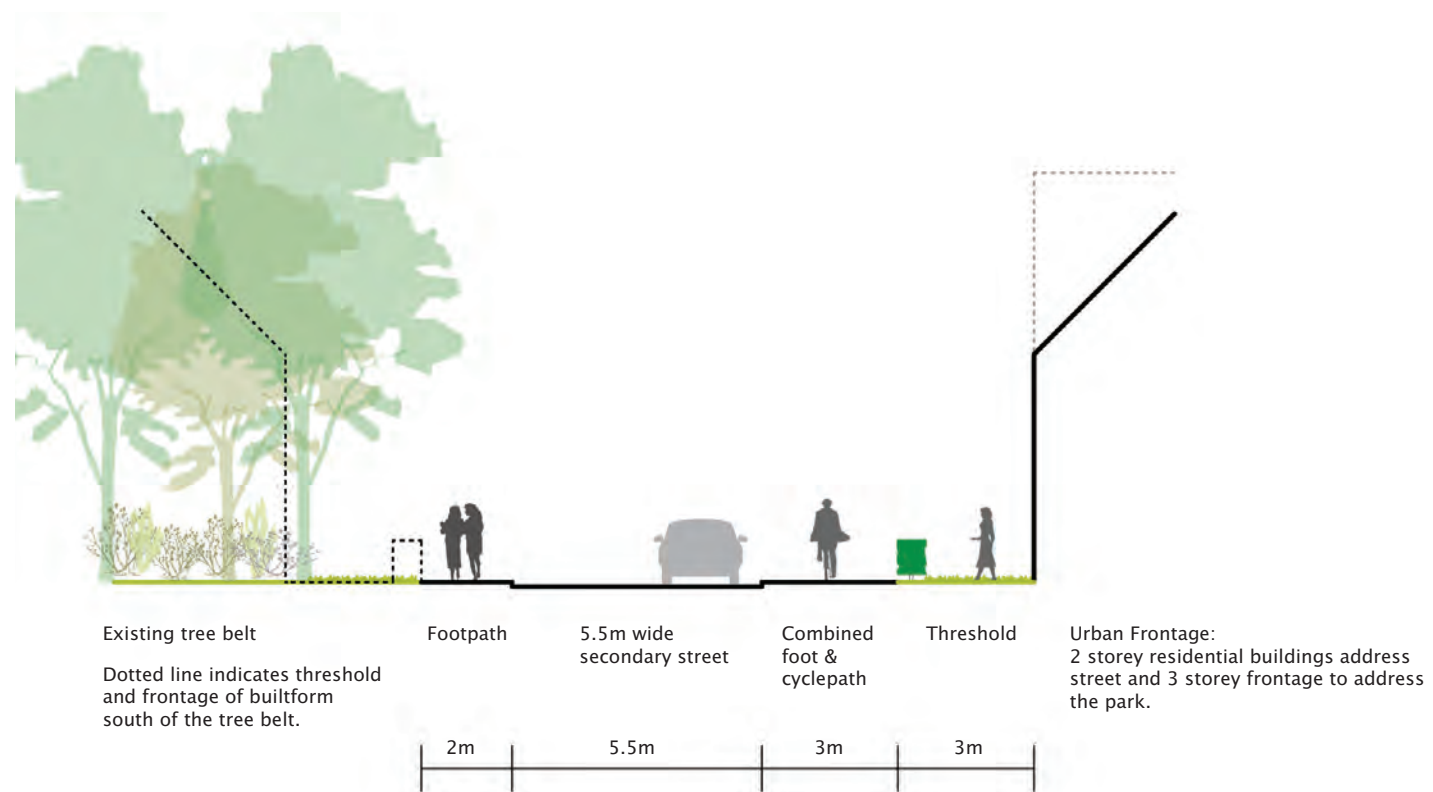
CODE 5_SECTION



CODE 6_SECTION



CODE 7_SECTION



CODE 8_SECTION

5.4 park frontage

Park Frontage Design Code

- › Joined up builtform to provide a continuous frontage, overlooking and spatial definition.
- › Narrow threshold space; no driveways between frontage and street.
- › Front doors on to street.
- › 2–3 storey, as per heights diagram



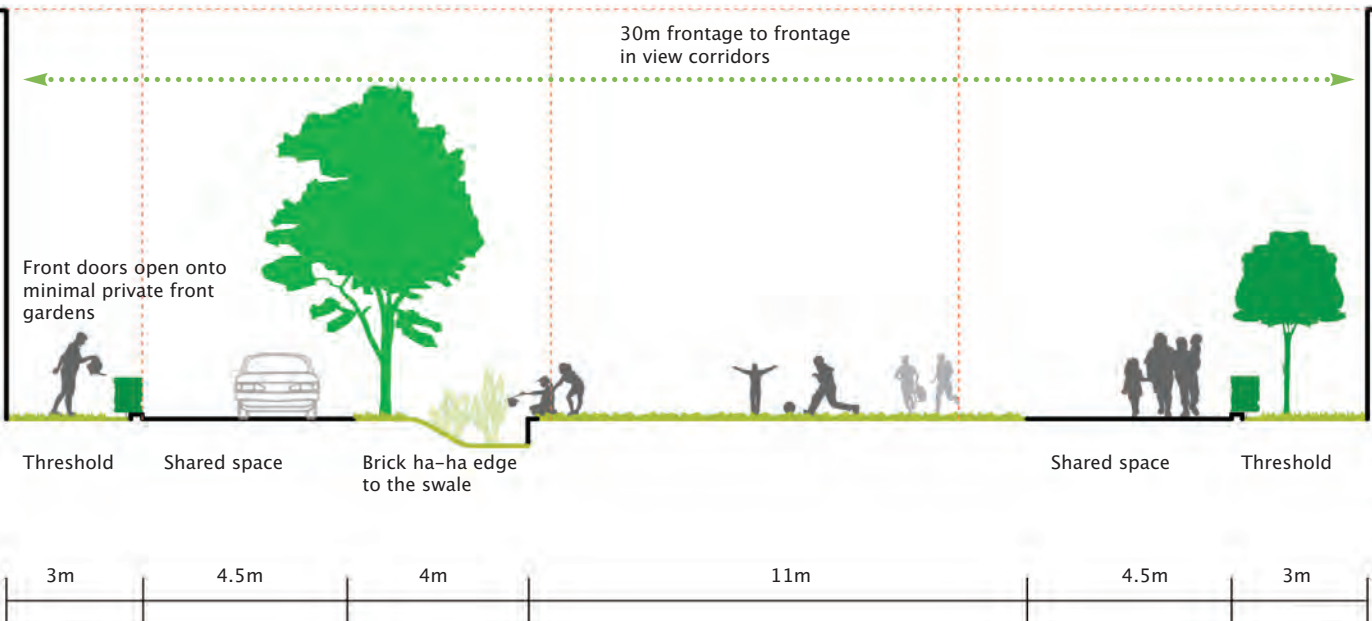
Residential frontage to provide enclosure to the urban park and frame the view.

Large windows overlook the public realm, to bring activity and passive surveillance.

Height of buildings varies depending on location, refer to heights diagram.

In-curtilage carports allow frontages to be close to the street.

Spatial enclosure 1:3 to 1:3.5

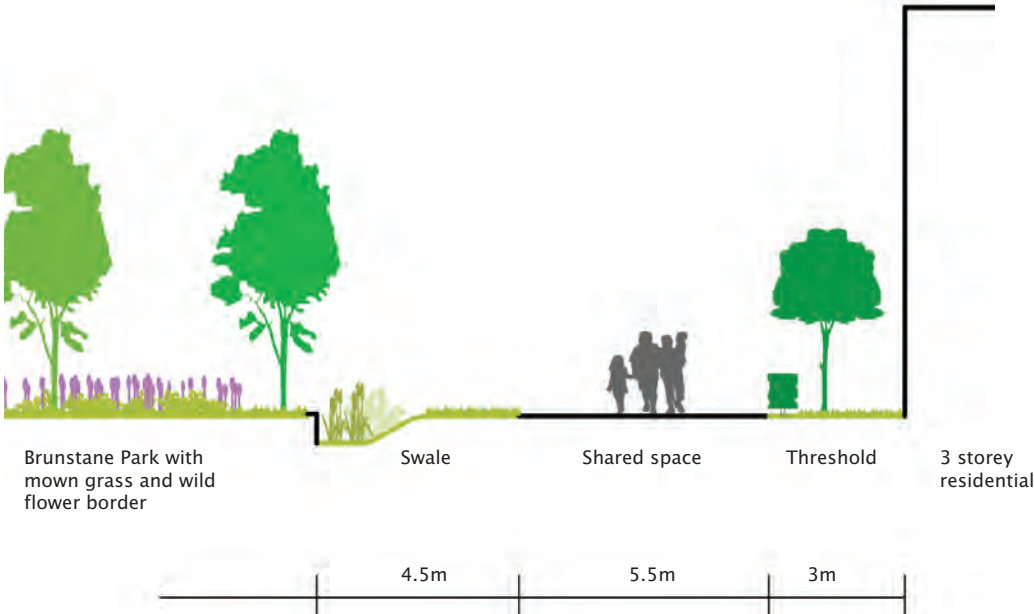
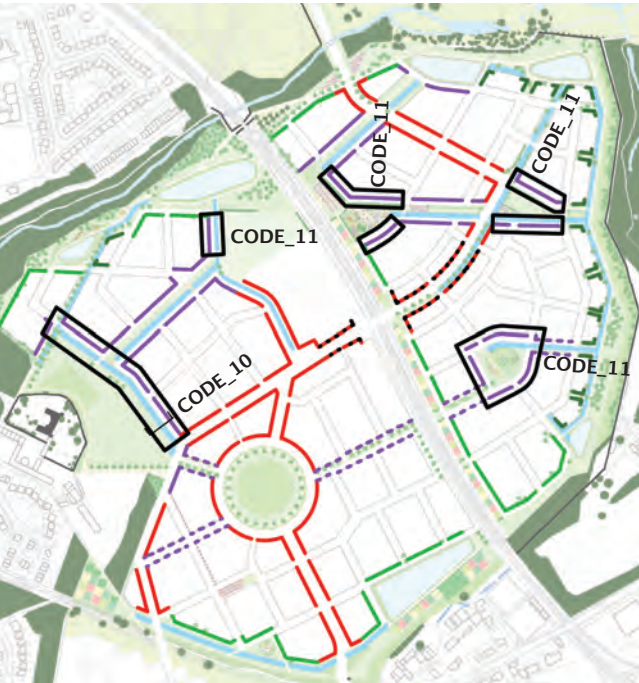


Residential frontage to provide enclosure to the urban park and frame the view.

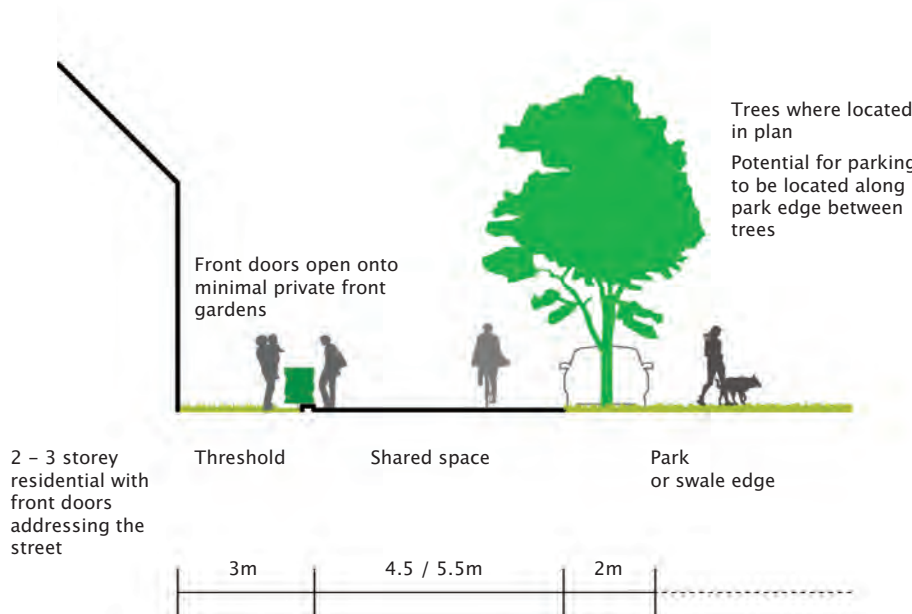
Large windows overlook the public realm, to bring activity and passive surveillance.

Height of buildings varies depending on location, refer to heights diagram.

CODE 9_SECTION



CODE 10_SECTION

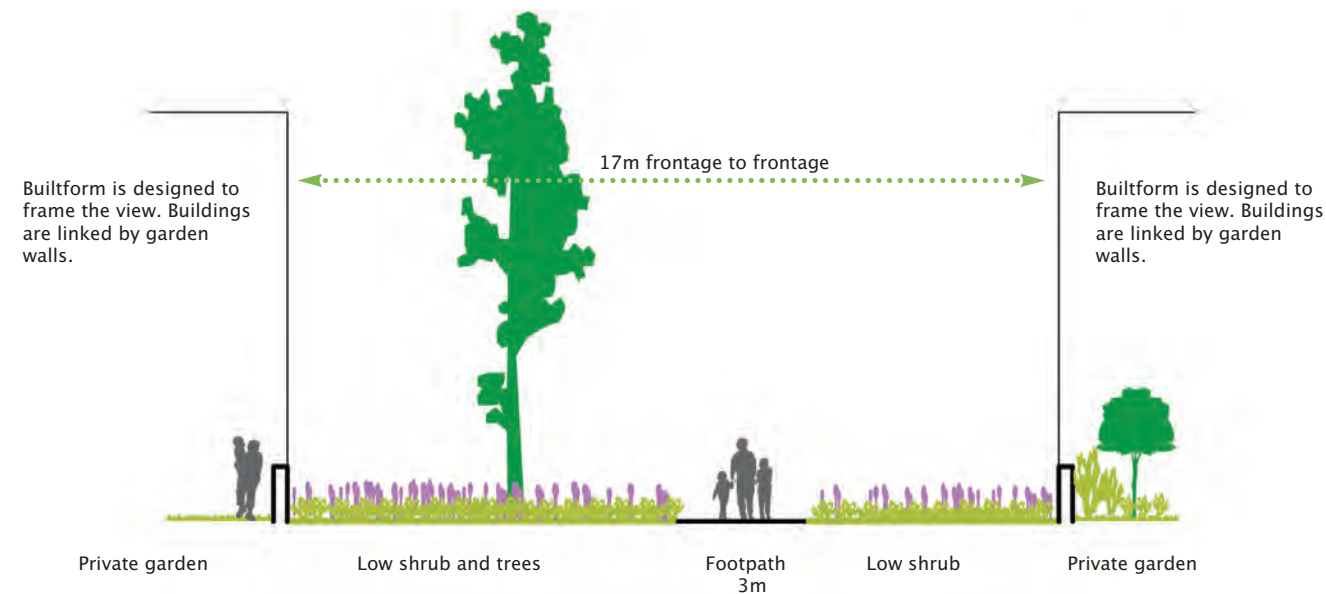


CODE 11_SECTION

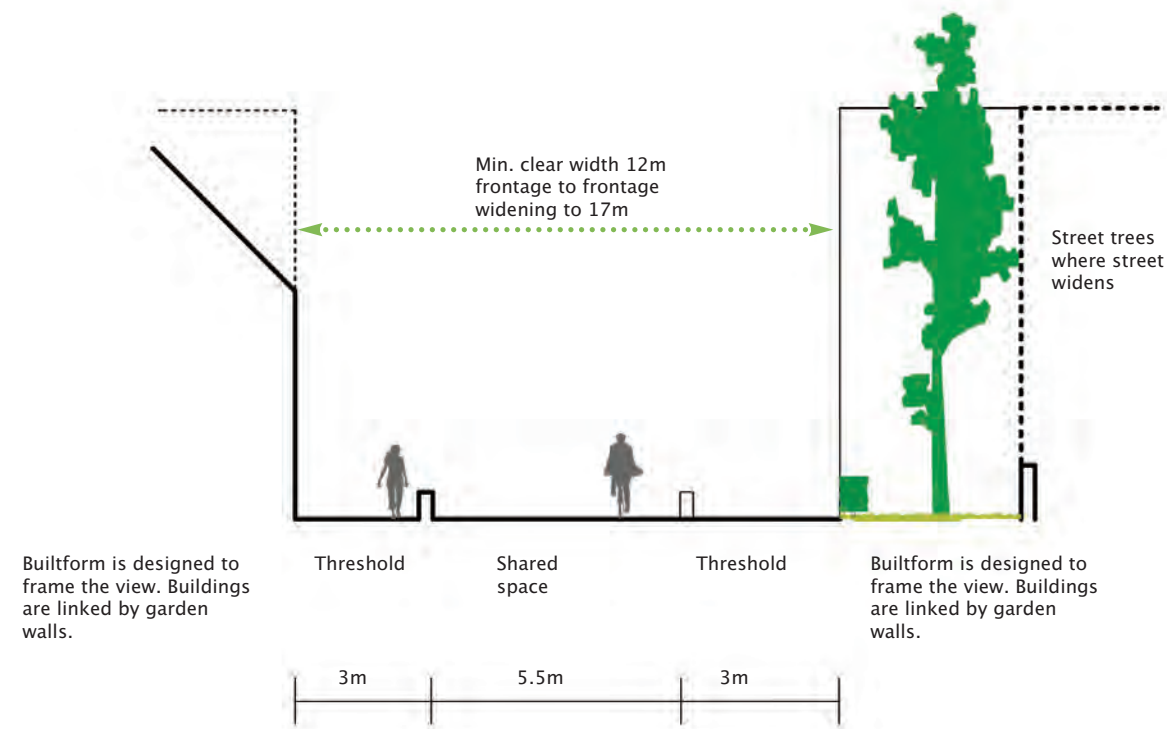
5.5 framed view

Framed View Design Code

- > Builtform frames view corridor.
- > Joined up built form linked by garden walls and hedges.



CODE 12_SECTION

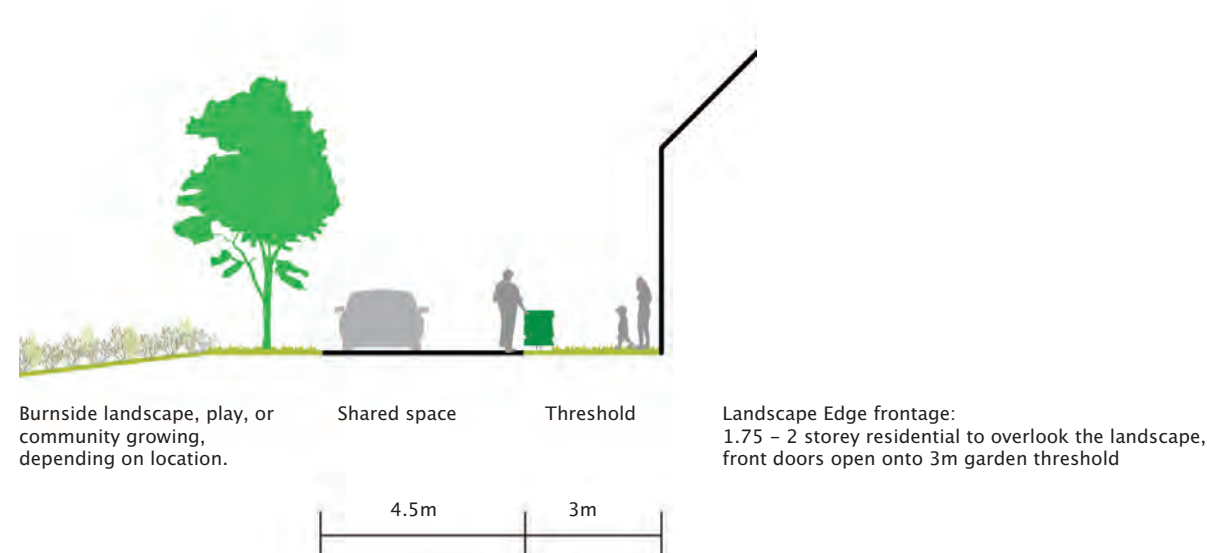


CODE 13_SECTION

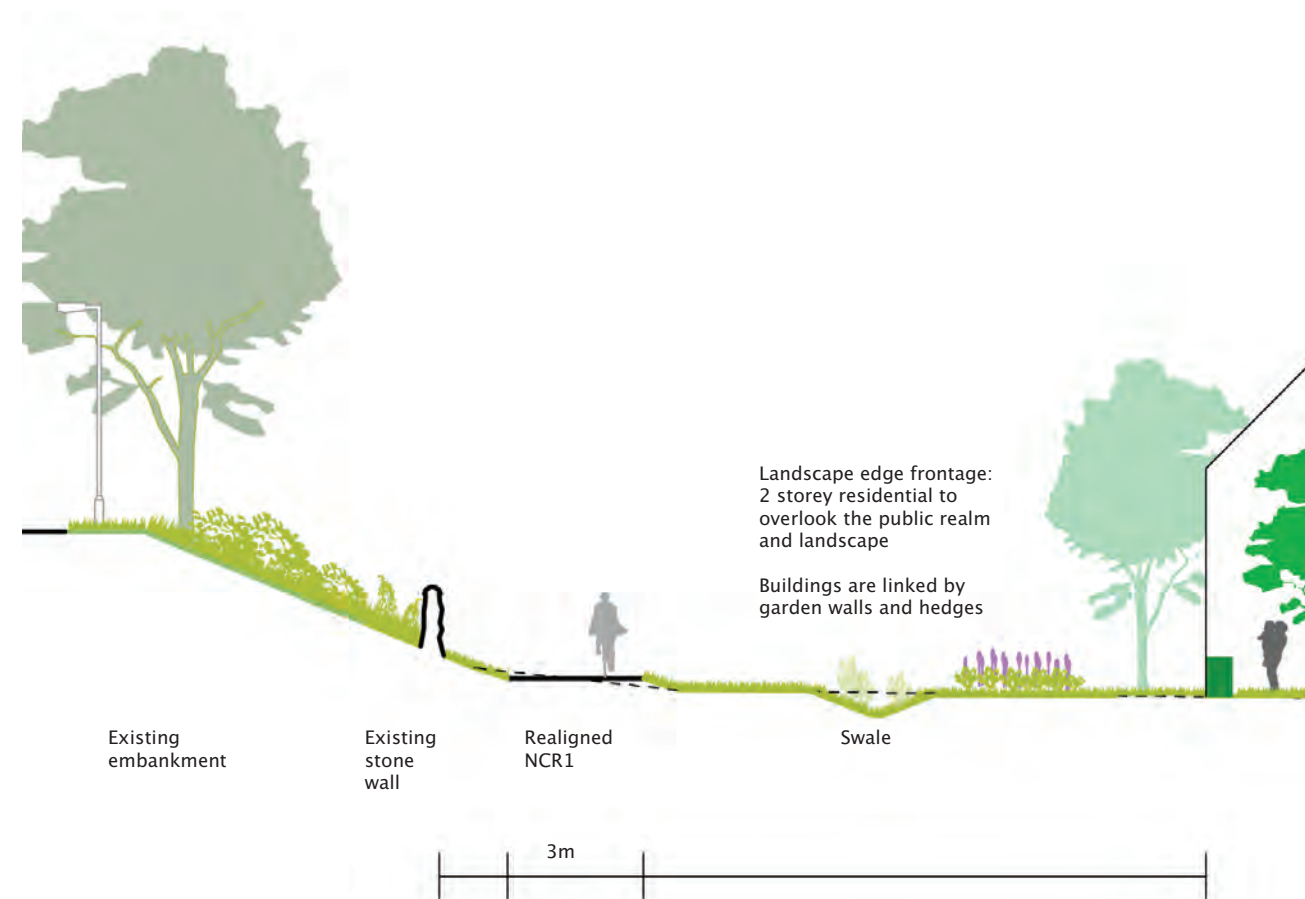
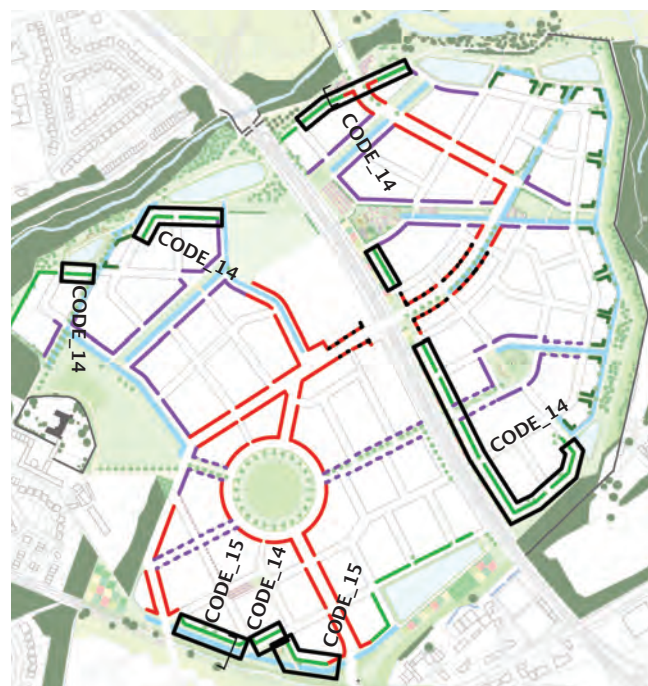
5.6 landscape edge

Landscape Edge Design Code

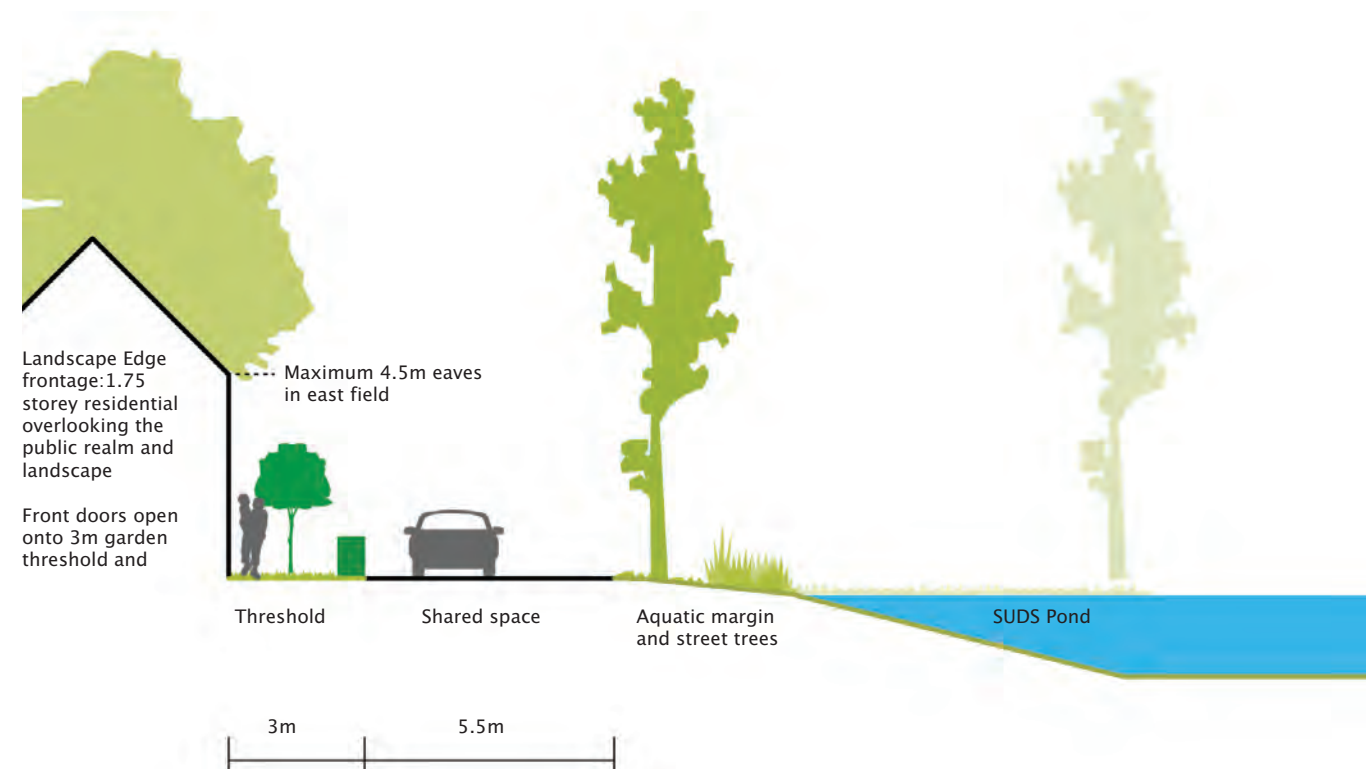
- › Frontage addresses landscape.
- › Joined up built form linked by garden walls and hedges.
- › Typologies depending on location: range from terraces in medium density areas to detached in low density areas.
- › No blank walls or high garden fences to the public/private boundaries.
- › Windows are to overlook the public landscape edge, to ensure passive surveillance.
- › Front doors to open towards spaces to ensure activity.



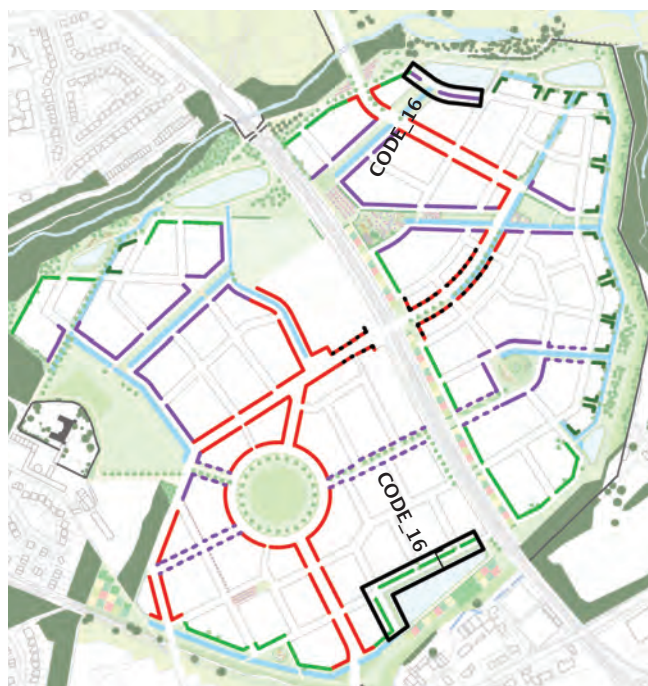
CODE 14_SECTION



CODE 15_SECTION



CODE 16_SECTION



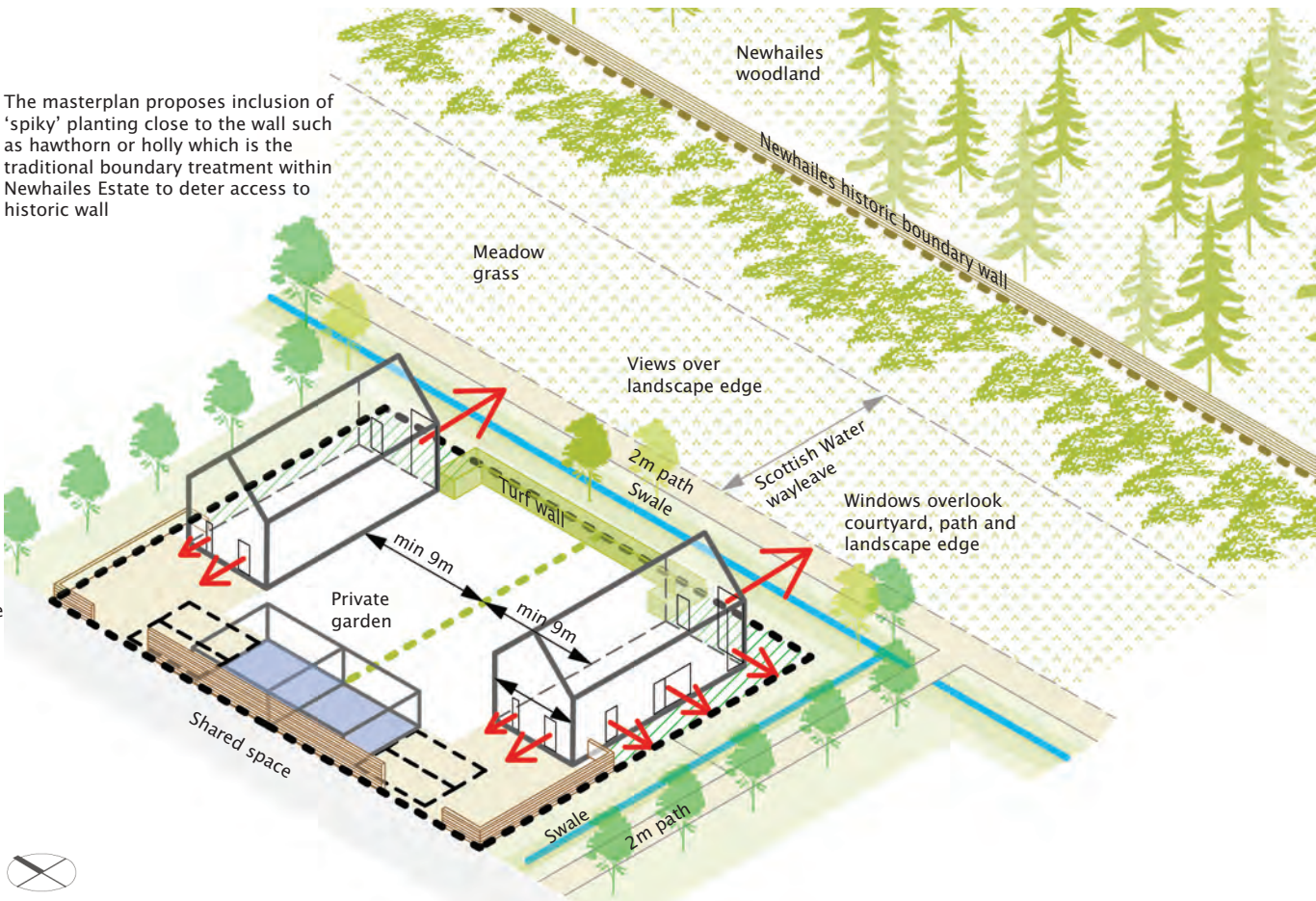
5.7 newhailes edge

Newhailes Edge Design Code

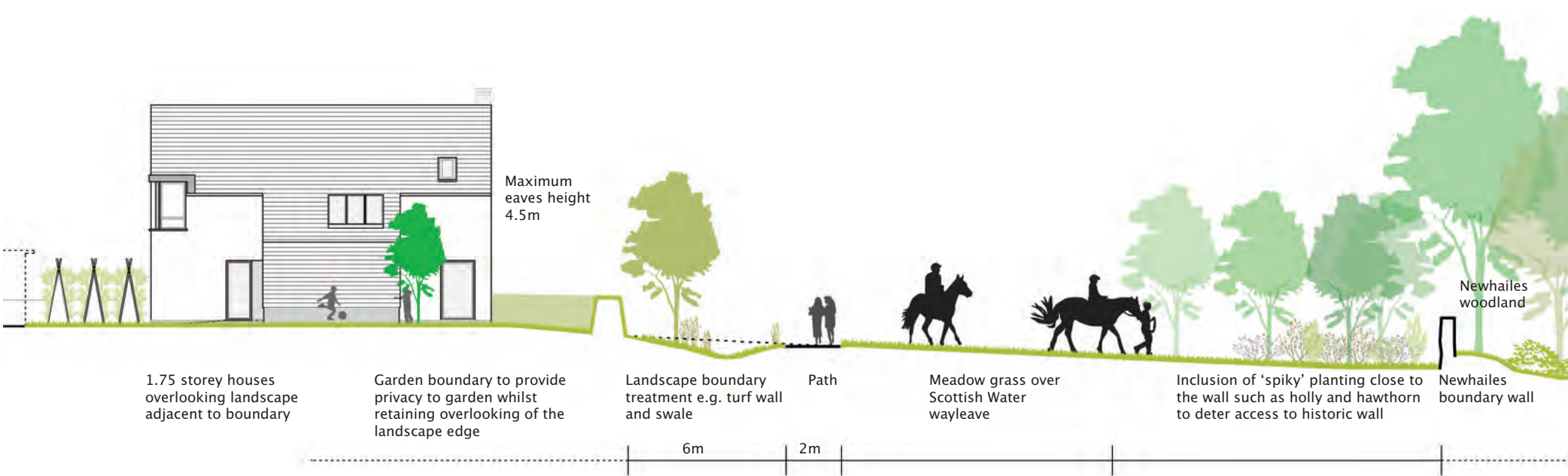
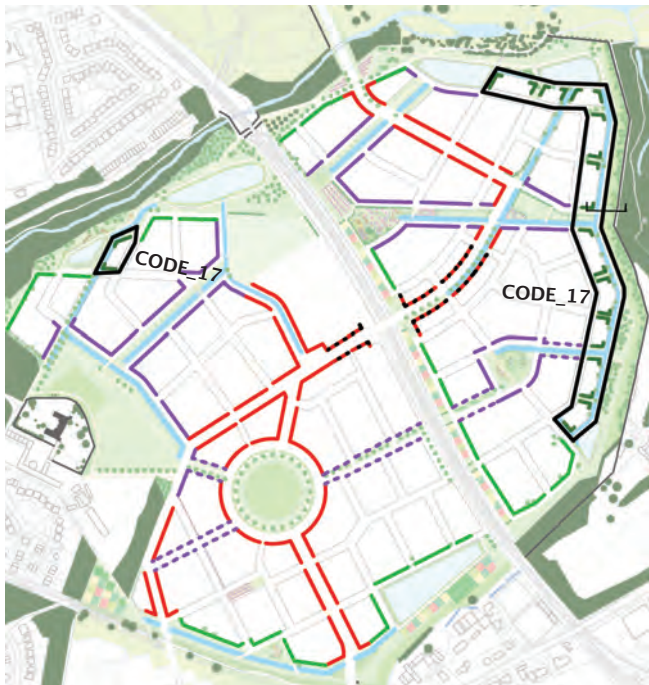
The code for this edge is defined by the diagram and section:

- › Pairs of houses are linked by a turf wall or hedge enclosing the private gardens. The relationship of gables and turf wall or hedge should be consistent along the length of the Newhailes landscape boundary so that the view from the landscape should reveal a holistic composition.
- › A threshold space with low level planting wraps the landscape edge of the builtform. It is separated from the Newhailes landscape and meadow grass beyond, by a layering of tree planting and swales.
- › Windows that allow views into the landscape are positive in providing natural surveillance of the public boundary, landscape and footpath.
- › Garages and in-curtilage parking courtyards are proposed adjoining the shared space street.
- › Garden walls join up with co-planar garage walls to define the boundary to the street.
- › Low walls wrap the corner of courtyards to give enclosure and define the public private boundary.
- › Windows overlook the courtyard and the lane beyond.
- › No garages or outbuildings are to occupy the landscape edge to Newhailes.

The coding for Newhailes Edge also applies to a small development area in the western field where a similar attitude is adopted towards its landscape edge.



CODE 17_DIAGRAM



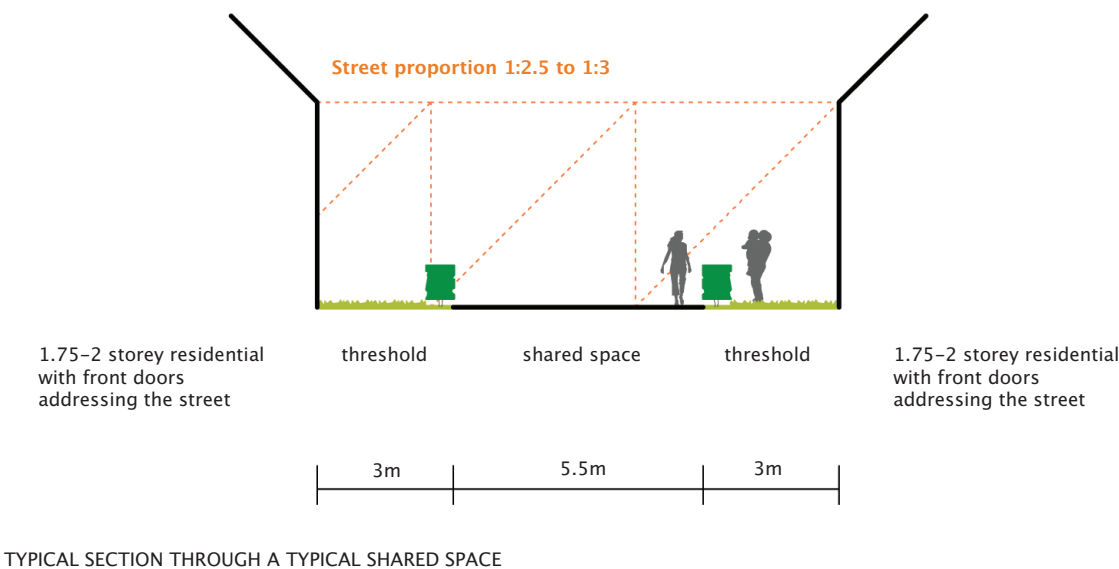
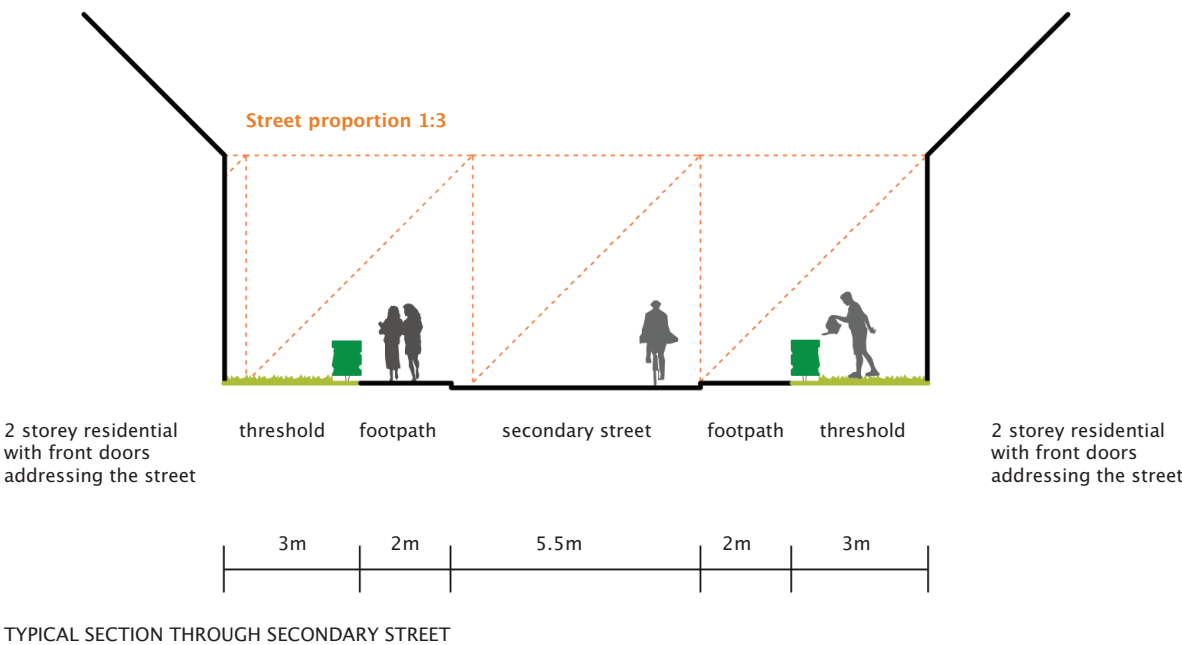
CODE 17_SECTION

5.8 residential street coding

Residential Streets Design Code

These sections are not keyed to specific locations on coding plan but are typical coding for the secondary streets and shared spaces within masterplan street pattern.

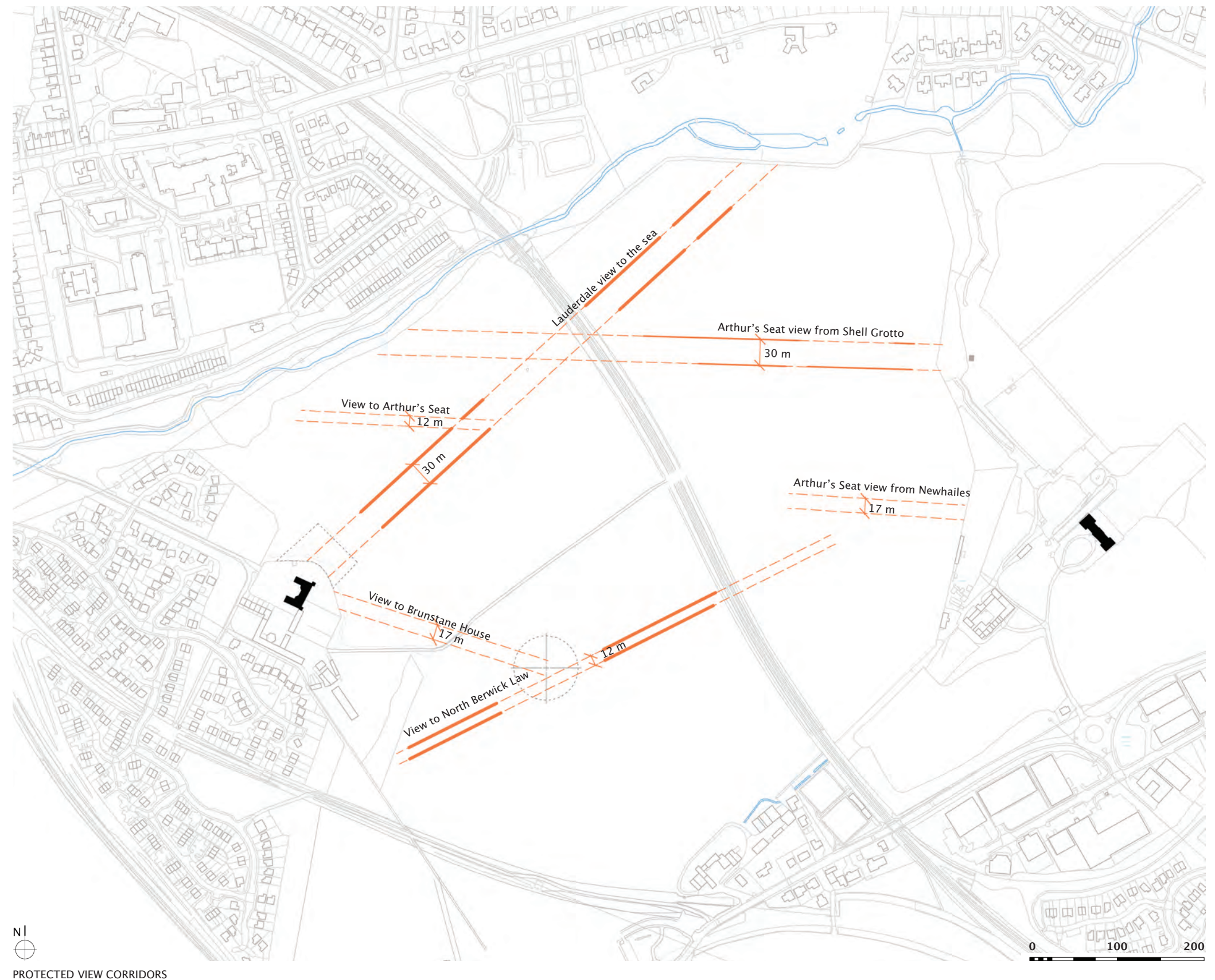
- › Streetscape designed to reduce vehicle speeds and encourage walking and cycling.
- › Narrow threshold space defined by hedges or low garden walls.
- › Front doors open on to street.
- › Parking to be provided in pends, courtyards or discreet locations to the side of houses. 6m driveways to the front of houses should be kept to a minimum.



5.9 view corridor safeguards

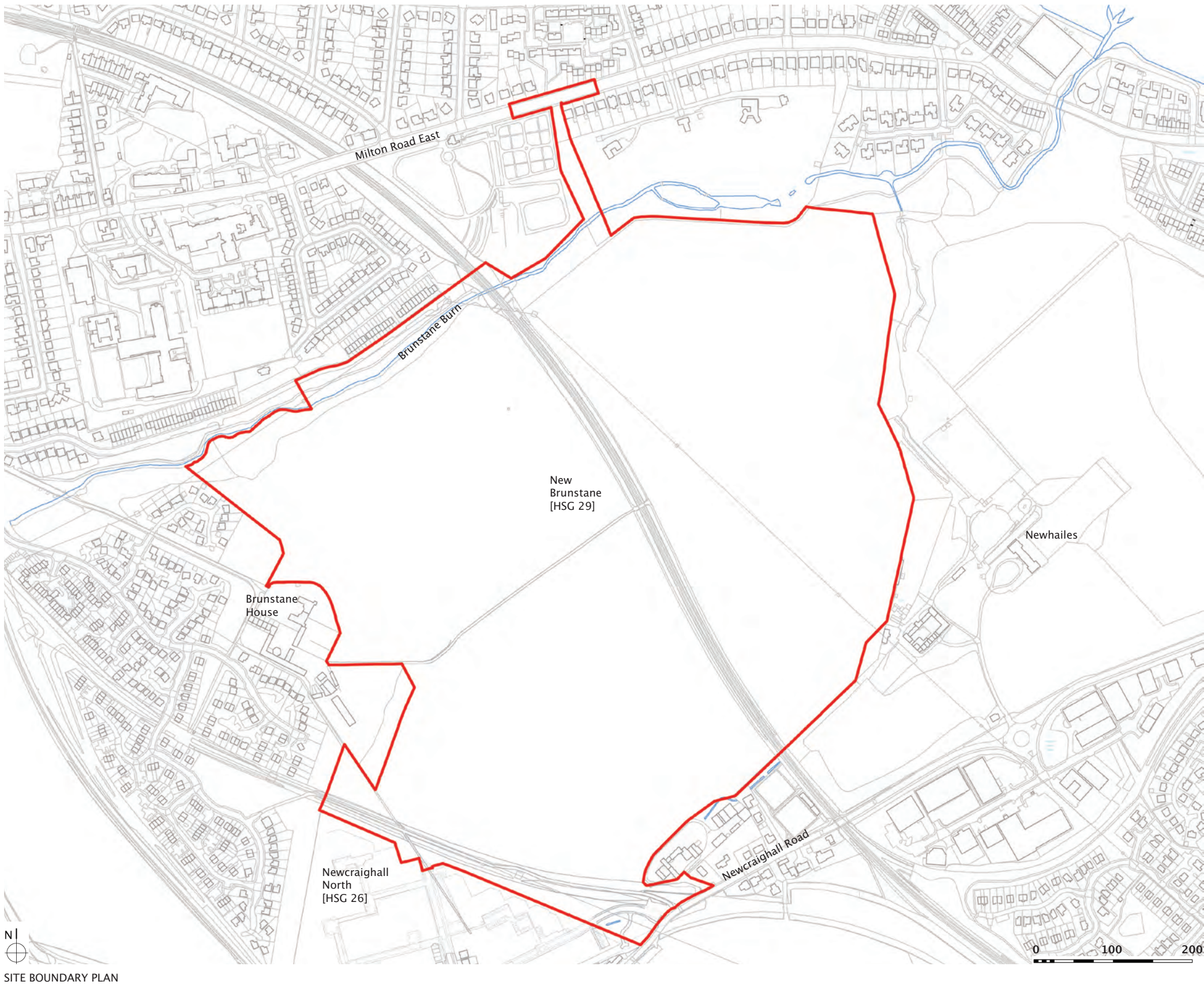
The views shown on the diagram are set out in order to safeguard a specific width of open space to allow for a clear view corridor to landscape elements beyond the perimeter of the site. These dimensions have been identified by analysing existing vistas of streets within Edinburgh, see appendix C.

The precise orientation and setting out points are to be defined at detail design stage in co-ordination with proposed topography and builtform heights. The extent of views vary along the length of the safeguarded corridor. Street trees may be allowed within the view corridor.



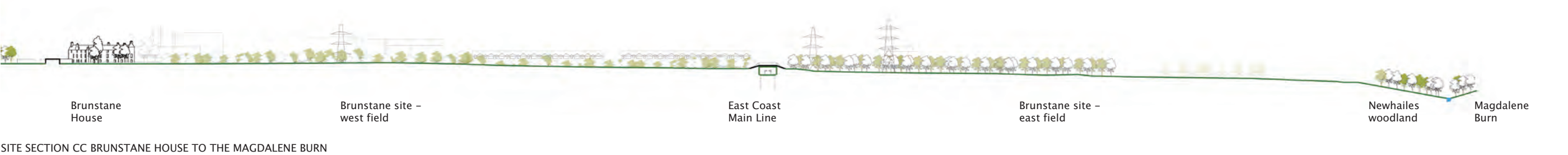
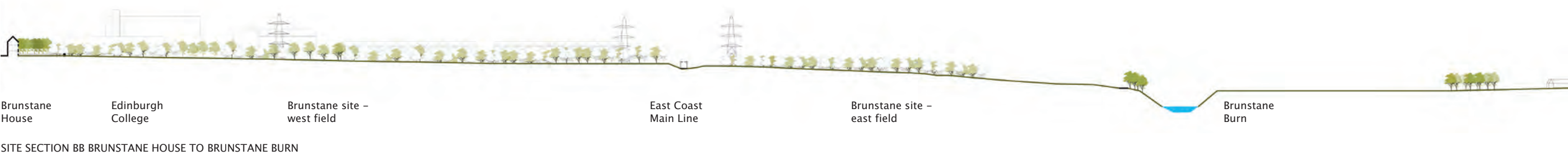
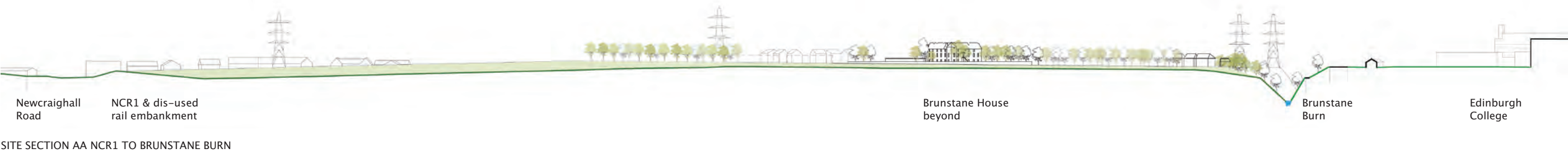
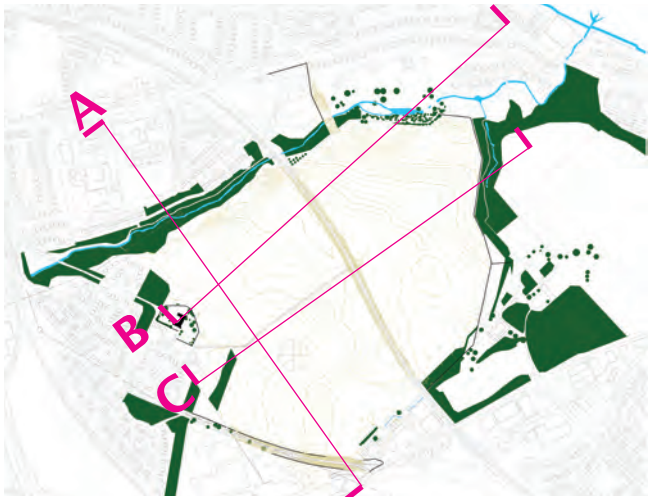
appendix A : site location plan

KEY
PPP site boundary



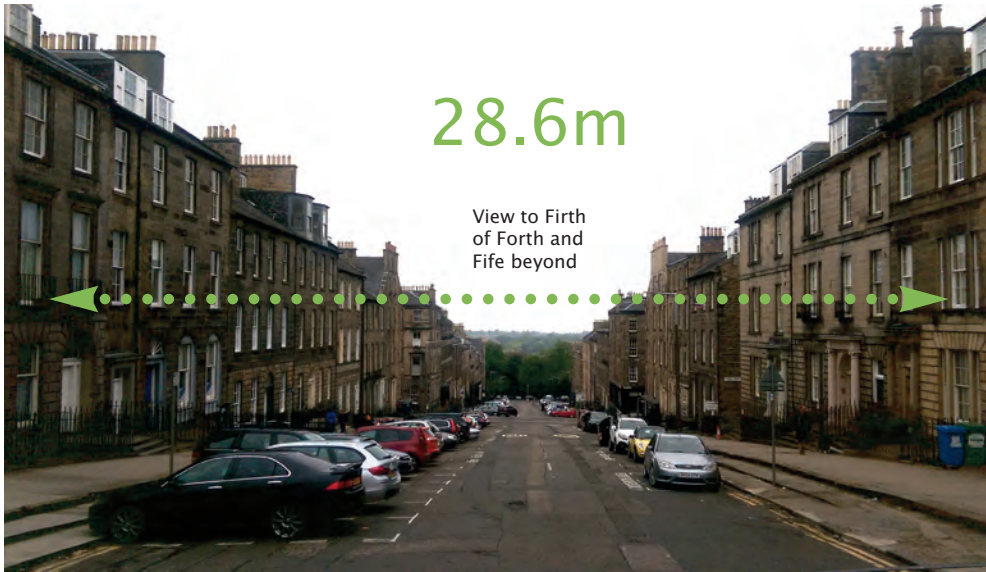
appendix B : existing site sections

The site slopes from a high point on the western edge of the site at about 35m AOD gently down to the north east – towards the sea and, along the northern boundary, more steeply towards the incised valley of the Brunstane Burn. The low point of the site, at the northeast corner, is at about 15m AOD.

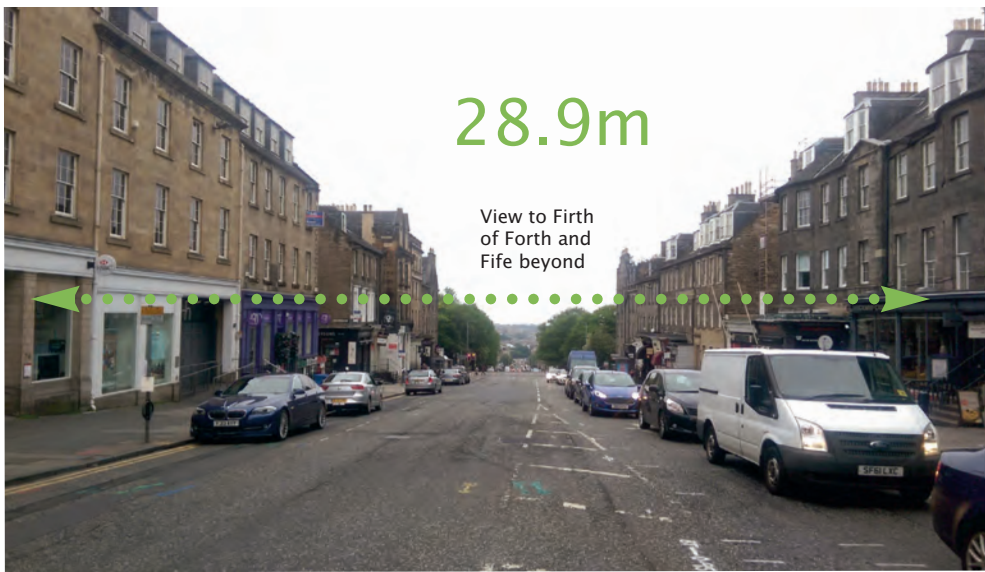


appendix C : spatial comparisons

An analysis of Edinburgh New Town streets has informed the design of the masterplan. These typical New Town streets frame distant views to the sea and essentially work in a similar way to the view corridors proposed in New Brunstane. The frontage to frontage distance is approximately 30m in width.



VIEW DOWN DUBLIN STREET



VIEW DOWN DUNDAS STREET

The axial nature and proportions of George Street, within Edinburgh’s New Town, allows a framed view of West Register House, in Charlotte Square. The 30.7m wide street allows views from St. Andrews Square to Charlotte Square, a distance of more than 800m.

The success of this view corridor, in both proportion and its role as an axis between designed public spaces, has been key to formulating the designs of the view corridors within New Brunstane.



VIEW WEST ALONG GEORGE STREET TOWARDS WEST REGISTER HOUSE


appendix D : realigned john muir way

In order to ensure the continuity of the John Muir Way walking route, a realignment is proposed, where it is crossed by the principal access at the northern gateway. This sketch proposal has been developed alongside discussions with SNH and CEC's access officer.

A single crossing point is proposed, combined with the junction of shared space residential streets. A short existing section of the John Muir Way will be removed and become part of the proposed soft landscape edge. This will ensure that there is no conflict between the old and proposed path, and emphasis is given to pedestrian's crossing at a single point. This provides an opportunity to enhance the safety of the walking route, which will have better natural surveillance from the proposed adjacent housing.

The proposed footpath to the east of the principal access travels through the soft landscape edge. This route allows the gradient of the realigned path to be less than 1 in 20. The shape of the path echoes the form of the original path which is characterised by straight sections and angular bends.

To the west of the principal access, the realigned John Muir Way is a 3m path running parallel to the north edge of the 4.5m street and separated by a line of trees.

KEY
 The red hatch indicates the extent of existing path that is to be removed and replaced by soft landscape.

