

Joseph Norton Academy Deighton Landscape Statement

19^h April 2024
JNA-COL-XX-XX-DOC-005_Rev03
for Planning



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DESIGN STRATEGY

A SCHOOL IN NATURE

The landscape concept for Joseph Norton Academy has been developed in close liaison with Kirklees Council, Frank Shaw Architects, the school trust, together with arboricultural and engineering advice.

The landscape concept design seeks to complement the function and character of the proposed building, creating a holistic site that supports the overarching educational & pastoral needs of pupils. The external environment will play an essential role in providing a welcoming, safe, calm, attractive and fully inclusive environment for all pupils, staff and visitors, and will offer a valuable resource that can be accessed and utilised to meet relevant aspects of each pupil's EHCP.

“The more green that people see throughout their day,
the greater the help to calm and regulate”

Shaun Kiernan, Wellspring Academy

The design has been developed in accordance with the DfE's BB104 guidance and draws out the unique qualities of a site - blessed with attractive mature vegetation, long views - that will work in concert with an educational philosophy that includes a farm and forest school at its heart.

KEY PRINCIPLES

The landscape concept includes:

- An identity shaped by Outdoor Learning Spaces and Forest School
- A secure site with appropriately designed boundaries, ensuring the safety of pupils, staff and visitors
- Inclusive, level access throughout the site
- Carefully designed vehicle routes and parking, to facilitate efficient and safe drop-off and pick-up close to the building's main entrance and individual Key Stage entrances
- Outdoor classroom spaces, physically connected to indoor classrooms
- Safe, intuitive and legible routes around the site
- Incorporation of carefully chosen trees, shrubs and lawn areas throughout the site, to create a calm, naturalistic setting for all
- Physical and visual links to the surrounding landscape context, to create wildlife corridors across the site, and 'borrowed' views beyond the site boundary



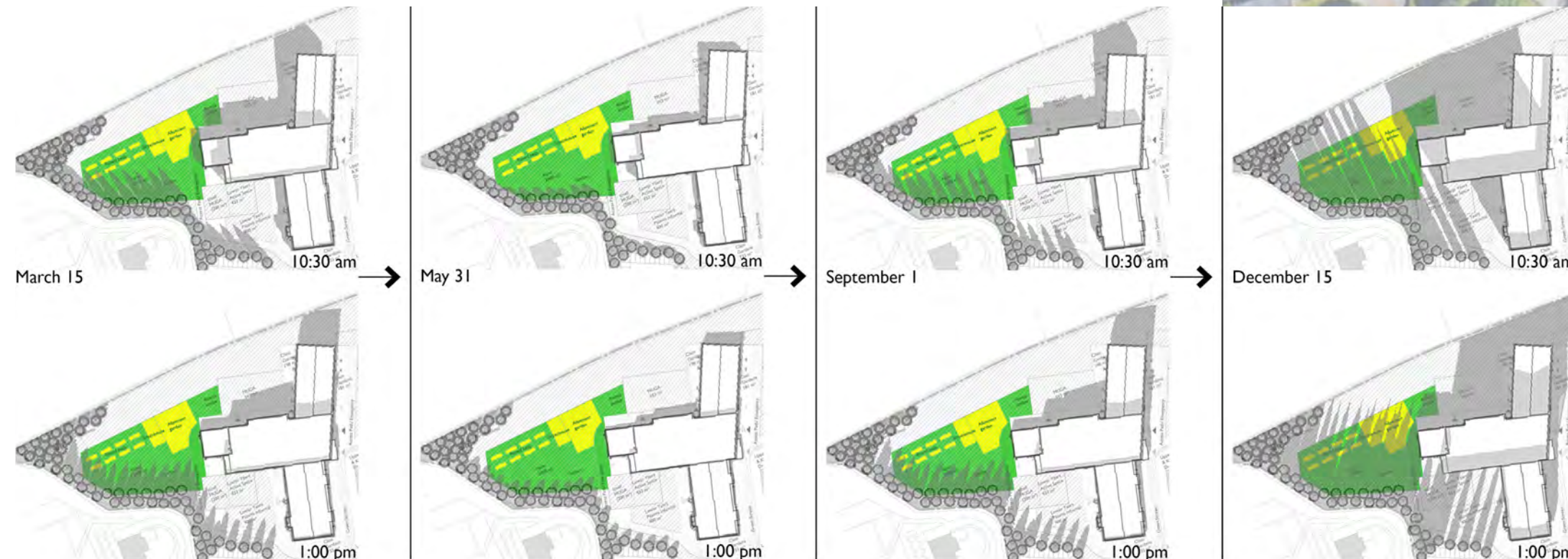


SITE ANALYSIS - TOPOGRAPHY & SOLAR STUDY

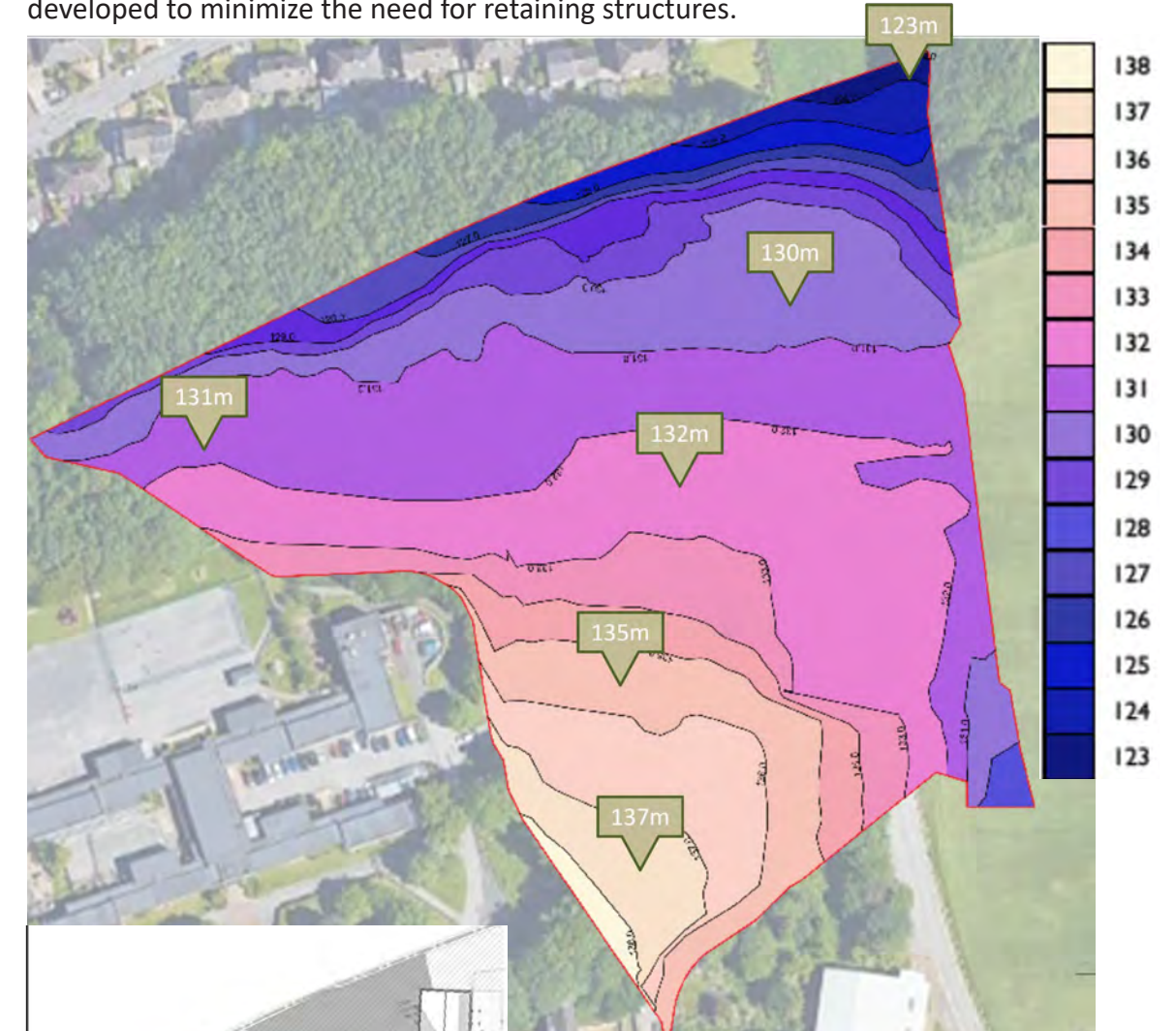
The characteristics of the site and surrounding area have informed the location and orientation of the proposed building and landscape, leading to a site selection to the west of available land. This avoids and sits above the two large terraces with sports fields.



Solar studies were used early in the design process to provide assurance that the crop growing area would receive adequate sunshine given the wooded perimeter.



Within the site, there is a significant level change with a largely north-easterly aspect, and two principal terraces that drop away sharply to the north. The design has been developed to minimize the need for retaining structures.

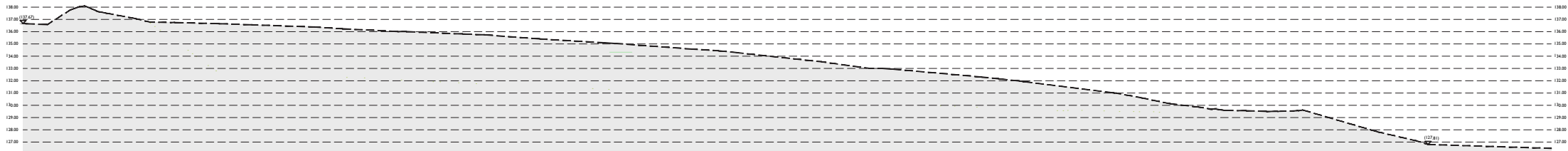


The 15m level change from the high point in the southwest falls to the low point in the northeast.

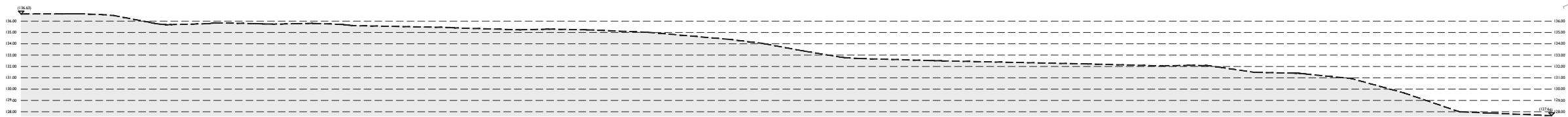
The flattest, most developable land is between 130 and 134m AOD in an east-west band through the centre of the site.



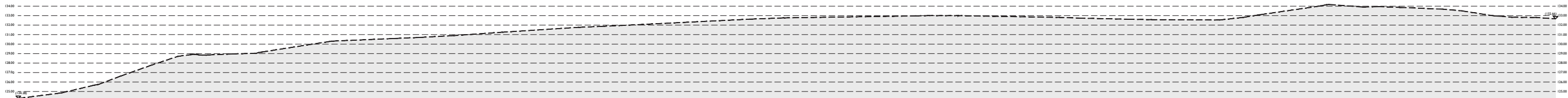
SITE ANALYSIS - EXISTING SITE SECTIONS



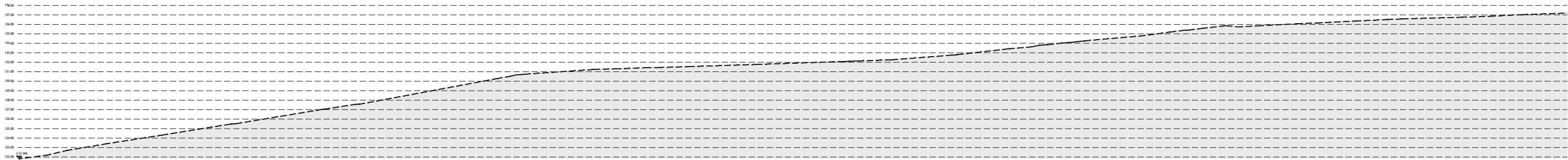
SECTION A



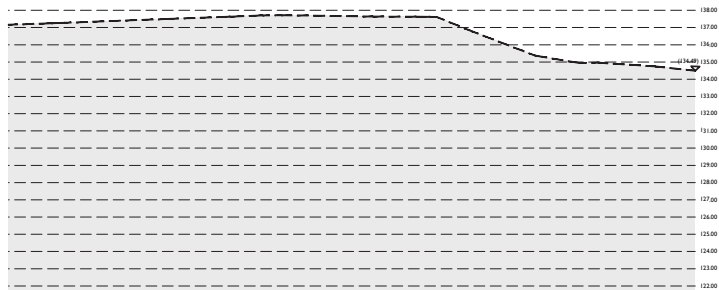
SECTION B



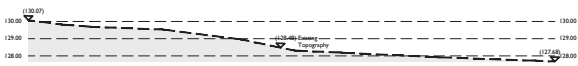
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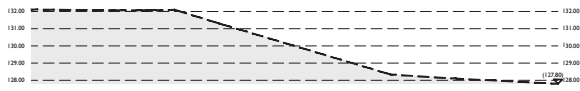
SECTION D



SECTION D continued



SECTION E



SECTION F



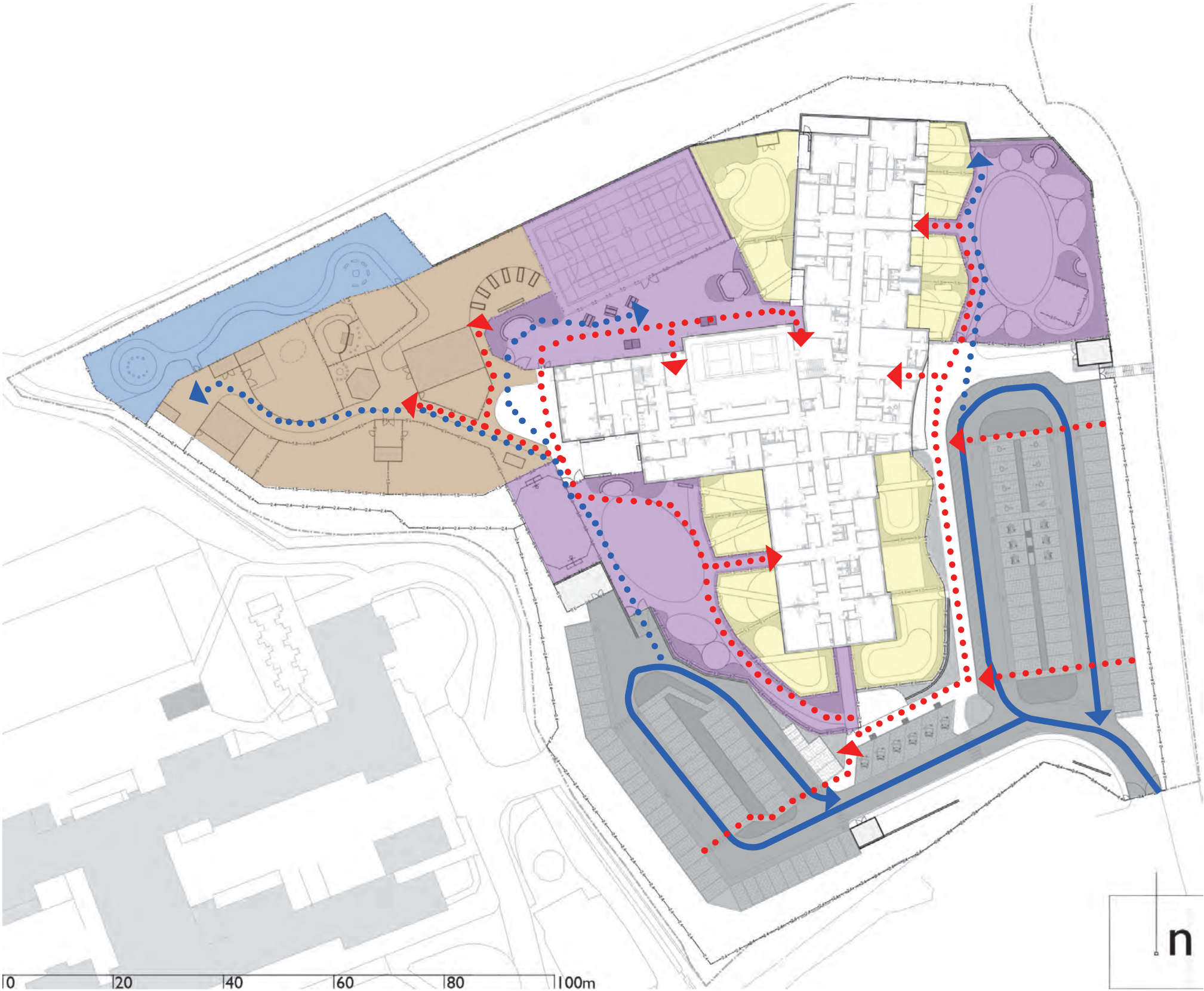
Key Plan 1:1500

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ACCESS STRATEGY

Movement into and around the site is safe, intuitive and legible. The site layout separates vehicles from key pedestrian routes and spaces; the former is located to the east/south and the latter to the west/north. These zones are semi-public and private, respectively. Morning drop-off and evening pick-up has been prioritised to the front of the site to minimise excessive site coverage by hard surface and avoid pedestrian/ vehicle conflict.



- Forest School
- Outdoor Learning Area
- Class Gardens
- Active & Informal Spaces
- Car Park
- Vehicular Circulation
- Occasional Service Vehicle Access
- Pedestrian Circulation

A GREEN SETTING

The site has been organized into zones which seek to 'weave' nature into the fabric of the site and its daily routine, so as to maximise the beneficial impact of vegetation on pupils.



④ Woodland Frame

① Arrival Orchard



- A welcoming start to the day with minimal stress
- Spring blossom, Summer leaves & Autumn colour
- Orchard is part of forest school concept
- Opportunities for food production and positive associations

② Outdoor Learning Area & Vocational Space



"Pigs are for therapy not bacon"

- Part of the daily routine at all ages
- Transfer and expand the current facilities
- Security of livestock is vital
- Solar study to locate crop growing areas
- Polytunnel and raised beds
- Composting
- Insect hotels
- Vocational space as part of the approach

③ Forest School



- Borrow the mature wooded surroundings to give character and warm embrace to the school
- Embed activities such as slides
- Sensory and calming walks – forest bathing
- Settings for outdoor learning
- Nudges for activity
- Screen fencing wherever possible
- Part of the daily routine at all ages
- Biodiversity enhancement with woodland



A large, solid pink circle is positioned on the left side of the image, partially cut off by the edge. It serves as a background element for the text.

DESIGN EVOLUTION



DESIGN EVOLUTION

Development of the landscape masterplan has been a highly iterative process between the educational operator including head teacher and farm manager, Kirklees Council, architecture, ecology, arboriculture, civil engineering, mechanical & electrical engineering, transport and cost planning with the landscape design.

To date there have been 31 revisions of the landscape masterplan so as to develop the optimal supportive layout for students welfare, wellbeing and operational requirements.



A large, solid pink circle that is partially cut off by the right edge of the frame, creating a soft, organic shape. The text is centered within this pink area.

URBAN GREEN SPACE



URBAN GREEN SPACE

As can be clearly understood from this Landscape Statement, the proposed school has been designed with planting and green infrastructure at the heart of its ethos so as to create a green supportive setting for the highly sensitive users of the school for whom environmental triggers can significantly determine their wellbeing and behaviour both positively and negatively.

We have sought to develop an integrated landscape – architectural – transport - civil engineering scheme that minimises these environmental triggers for pupils.

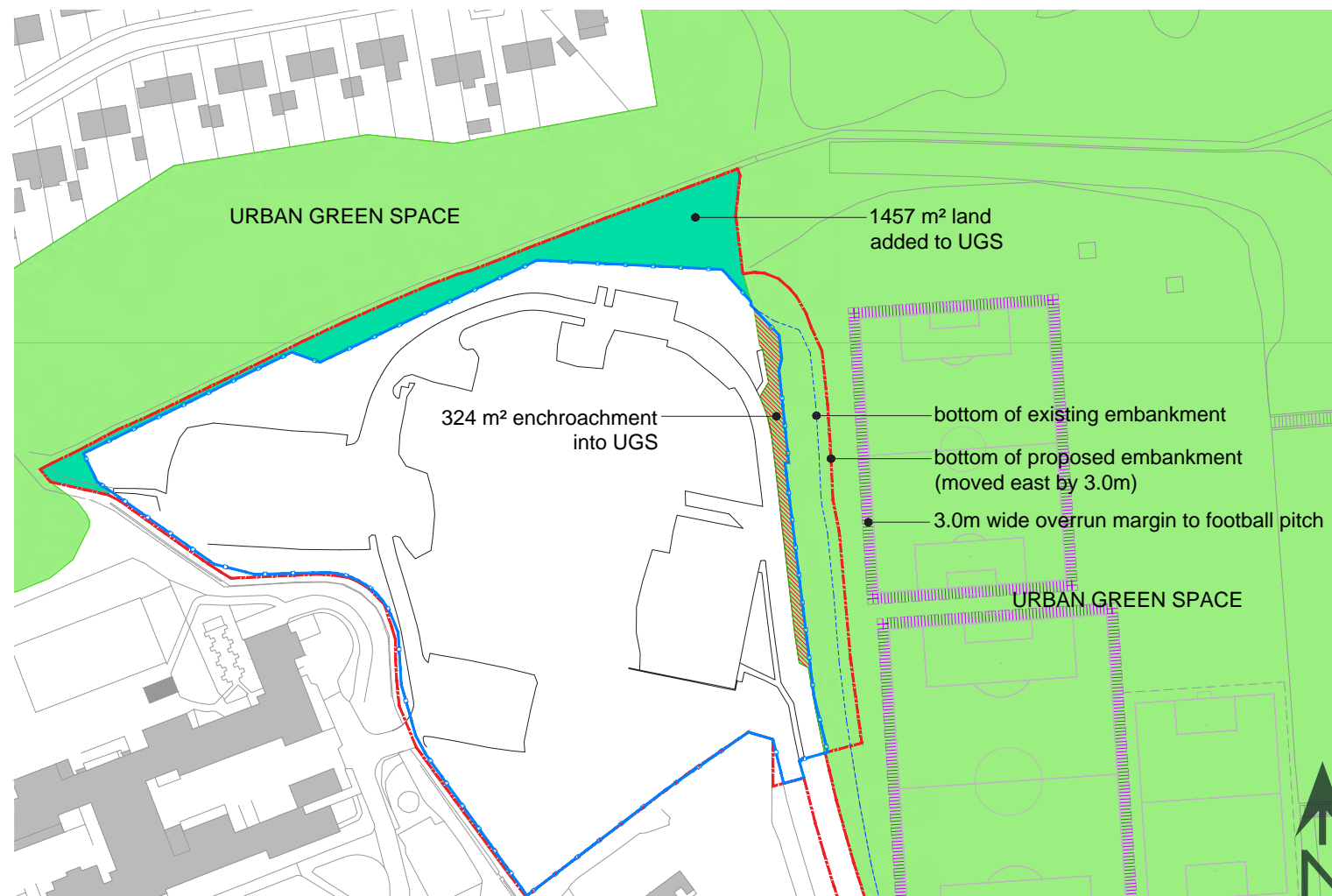
In order to meet this brief, it was however necessary to incorporate into the site a 324m² slither of Kirklees' Urban Green Space (UGS) of average width 3.5m on the bank along the eastern boundary and currently of use with the adjacent recreational field. This proportion of bank would be primarily utilised for planting but also includes the boundary fence, an incremental edge of play areas and the eastern extent of car parking space along the eastern boundary. The boundary fence would be located at the top of the bank so as to minimise the take of UGS with a line of trees and planting outside of the fence so as to minimise potential visual impact.

In return, a zone of housing allocation to the northeast of the site has been made available to become UGS which offers back 1,457 m², nearly 4.5 times the area encroached into.

Area of UGS gained = 1,457 m²

Area of UGS lost = 324 m²

NET GAIN = 1,133 m²



Why is the encroachment necessary ?

There are multiple pressures on every square metre of the proposed Deighton site with particularly onerous quantitative requirements with arrival, drop off, pick up, circulation, auto tracking and parking at the front of the school which must be balanced with the qualitative needs of a highly sensitive pupil group with social emotional and mental health needs and vulnerable to environmental triggers.

Teachers of the school find that if the day starts well for pupils, it may continue well, however if it starts badly, the whole day is likely to go badly with compounded impacts on the wider school community. Calming and 'regulation' of pupils is therefore essential and evidence dictates that the greener the school environment is, the calmer pupils are. As such an approach has been taken that creates a green experience both to arrival at the school, offering a softened car park with some planting and green outdoor spaces and outlooks for pupils.

In addition, accessibility for less physical able people has been a major consideration in site design. So as to achieve accessible gradients around the school significant earthworks have been required. To achieve an optimal balance of retaining walls and minimising the cut and fill balance so that bulky material is neither imported or exported from site. In terms of the playground to the northeast of the site, so as to achieve DDA compliant gradients falling away from the school, incursion into the UGS was required to the east. Due to steep gradients to the north and complying with the area requirements of BB104, the playground could not extend north. In addition, the whole building could not be moved west as this would squeeze all the area requirements to the west which would then not fit on site.

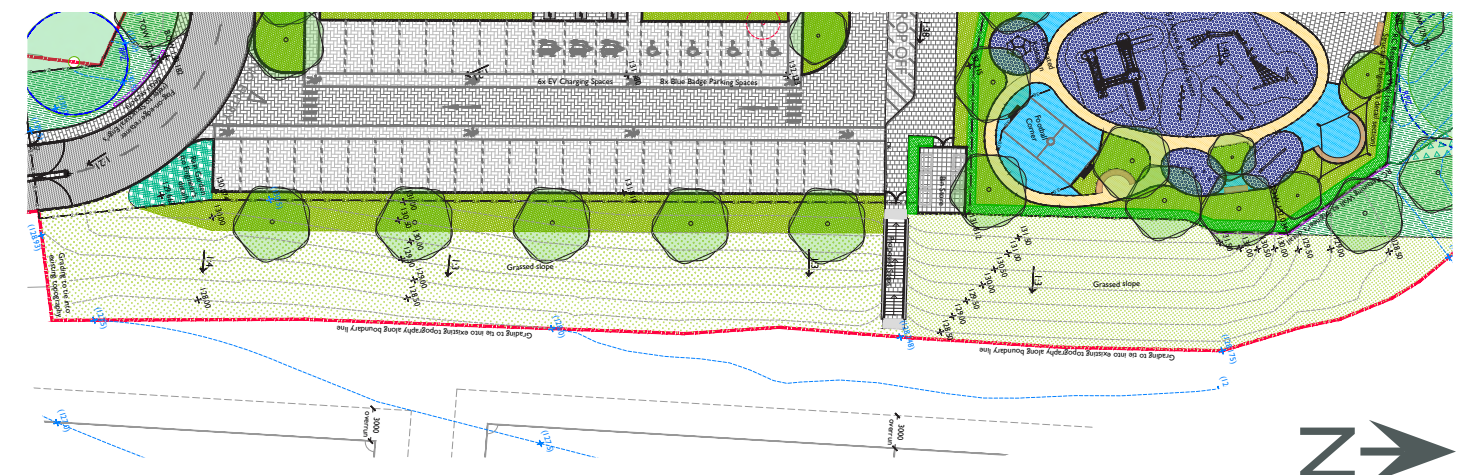
To date, the masterplan has been revised 37 times so as to balance the often conflicting requirements. This process tested many external space, car parking and drop-off options but ultimately as a last resort the only workable option was to extend east.

A number of measures have been taken to minimise the encroachment into the UGS, including the following :

- Locating the fence at the top of the bank, so the balance of the bank could be used as part of the adjoining playing fields;
- Use of gentle gradients ≤ 1 in 3 so that the bank stays suitable for lawnmower maintenance and could continue to be used as a spectator area.
- Keeping a distance of > 5.0 m from the bottom of the bank to the overrun margin of football pitches.

The physical changes

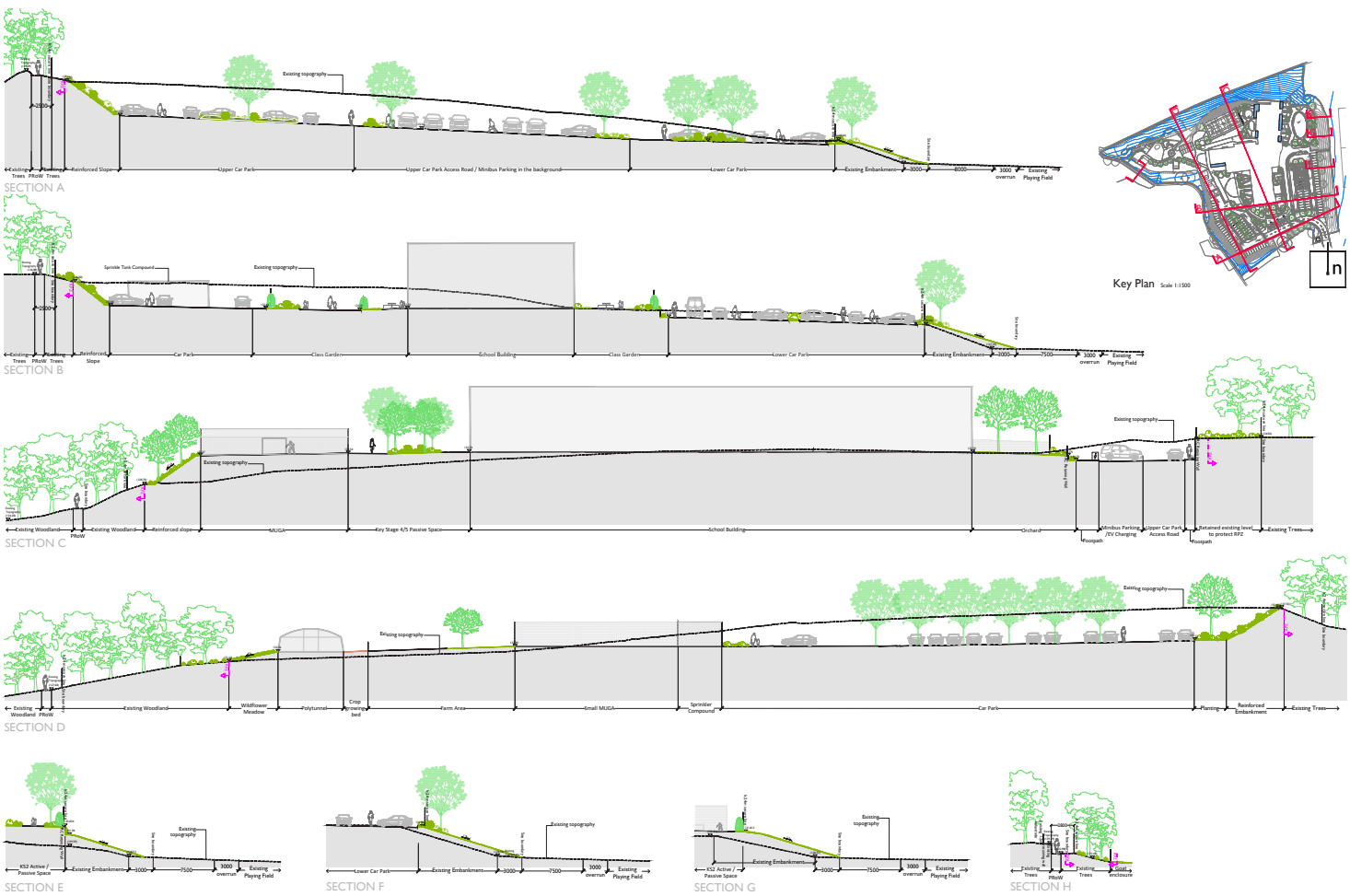
The diagram to the left illustrates the extent of the encroachment whilst the plan below demonstrates how this has been minimised :



URBAN GREEN SPACE

The physical changes

The sections below compare the existing and proposed bank profiles, giving a thorough coverage of the proposed earthworks.



The bank in question, can clearly be seen on the above aerial photograph to the east of the existing road.

It is understood that the bank is used by spectators for events on the adjacent flat land. This use, as well as the 3.0m width overrun requirement around the football pitch would not be impacted by the moving of the 1 in 3 slope further to the east. The planting of a line of broadleaved parkland trees along the top of this this slope would both enhance the visual amenity of the bank, assist with biodiversity and provide shade on hot days during events.

Furthermore, access between top, bottom and along the bank would be enhanced through the repair and reprovion of the existing steps.

In terms of visual impact from adjacent and UGS, the reduction of the informal flat area between bottom of bank and football pitch from former average 11.5m to 8.0m is judged not to be perceptible. The addition of a 2.4m fence at the top of the bank would be partly screened by a 2.8m wide native shrub planting strip to create a ‘green edge’, and the line of native broadleaved trees that are indicative of recreational parkland at the southern end of the bank.

It is noted that by definition :

‘Urban green spaces perform an important function by providing visual breaks in built up areas, contributing to the local character and attractiveness of towns and villages and providing important wildlife habitats’

When considering the local UGS, a measure is taken as per the above thumbnail view. The extension into the UGS equates to 324 m2 of the local 100,000 m2, which a is a loss of just over 0.3%.

In summary it is considered that the actual loss of UGS would not be significant to the material purpose or functioning of the UGS in that :

- 1. Overwhelmingly more land would be introduced into UGS than removed;
- 2. Land on the current bank which is not usable recreational space;
- 3. It is only occasionally used for spectator use in comparison to its benefit as green infrastructure that would offer a calming setting to the users of the SEMH;
- 4. Visually, the loss of UGS would be imperceptible in context of the wider UGS.

ECOLOGICAL MITIGATION

ECOLOGICAL MITIGATION

Arbtech Consulting Limited were instructed by Frank Shaw Associates Limited to undertake a Preliminary Ecological Appraisal and an Ecological Impact Assessment (EcIA) of the site. Key recommendations have been incorporated into the landscape scheme and the key findings of the EcIA follow :

| Feature | Foreseen impacts | Recommendations Measures required to adhere to guidance, legislation and planning policies. |
|-----------------------------|--|--|
| Designated sites | No impacts to designated sites are anticipated due to the distance of the proposed development from such sites (where known) as well as the semi urban location of the site with surrounding physical barriers. | Best practice measures to minimise the possibility of pollution and tree damage must be implemented during construction. |
| Habitats and flora | As it stands no plans have been produced indicating the location of the development. No direct impacts to any notable habitats are anticipated as a result of the proposed development. However, due to the proximity of the site to deciduous and ancient woodland, indirect effects such as pollution or tree damage could occur during construction. The proposed development will result in the loss of areas of managed and unmanaged grassland in addition to areas of scrub. This is likely to have a minimal impact on biodiversity due to the relatively low ecological value of these habitats and their semi isolated nature on the site. | Best practice measures to minimise the possibility of pollution and tree damage must be implemented during construction. The Local Planning Authority (LPA) may request an Arboricultural Assessment to determine impacts on trees. |
| Amphibians | Areas of unmanaged grassland and scrub will likely be removed during construction. The loss of such habitats is likely to be inconsequential to local amphibian populations owing to their low value and the presence of more extensive habitat locally. However, site clearance could result in the death or injury of common amphibians, if present. | A precautionary working method will be implemented for common amphibians during construction. |
| Reptiles | Areas of unmanaged grassland will likely be removed during construction. The loss of such habitats is likely to be inconsequential to local reptile populations owing to their low value, semi isolated nature and the presence of more extensive habitat locally. However, site clearance could result in the death or injury of reptiles, if present. | Owing to the nature of the proposed development and the low potential for impacts to reptiles, further surveys are considered to be disproportionate. A precautionary working method will be implemented during construction. |
| Foraging and commuting bats | It is anticipated that the proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development may include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas. | A low impact lighting strategy will be adopted for the site during and post-development. |
| Badger | It is anticipated that the woodland areas will not be impacted by any development. It is likely that areas of scrub and unmanaged grassland will be removed during construction. The loss of such habitats could result in a reduction in badger habitat and could result in the fragmentation of the local landscape. Furthermore, construction activities could result in the death or injury of badgers, if present. | Owing to the nature of the proposed development and the low potential for impacts to badgers, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction. |
| Hedgehog | Areas of grassland and scrub will likely be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present. | A precautionary working method will be implemented during construction. |
| Birds | Areas of scrub will likely be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests. | Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the tree/vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. |



ECOLOGICAL MITIGATION STRATEGY

Existing Woodland Frame

- To be retained.
- Improve existing moderate quality woodland with adequate understory planting and seeding.
- Proposed extension of the current woodland area by adding new native tree planting and undergrowth seeding to its fringe.
- Reduce construction impact to woodland and wildlife. Timing for vegetation removal works shall avoid the bird breeding season from March till end of August. If this timeframe cannot be avoided, a qualified ecologist shall undertake a close inspection prior to the commencement of work. All active nests will be retained until fledging.
- Proposed Bird Nesting Boxes (8 no.) and Bat Boxes on existing trees.
- Proposed habitat creation/ enhancement for species like bats, badgers, hedgehogs & birds (e.g. log piles, rubble piles, dense coverts).

Class Gardens

- Proposed Bee/ Bug hotels and Bird feeding stations
- Proposed Bird Nesting and Bat Boxes to building
- Hedgehog gaps in the fences
- Low impact lighting strategy for the site during and post-development.

Biodiversity Zone

- Proposed Natural Pond with surrounding wetland zone to provide habitats for dragonflies and amphibians.
- Proposed Wildflower Meadow to provide habitats for invertebrates.

Active/ Passive Outdoor Spaces

- Proposed Bee/ Bug hotel
- Proposed bird nesting and bat boxes on trees
- Trees & hedges to screen off/ mitigate human activity impact on adjacent wildlife habitats
- Proposed Native flowering & fruiting trees to attract pollinators and provide habitat and foraging opportunities for birds
- Hedgehog gaps in the fences

Car Park

- Proposed Bird boxes to existing and proposed trees
- Trees & hedges to screen/ mitigate human activity impact on wildlife habitats
- Proposed Native flowering trees to attract pollinators and provide habitat and foraging opportunities for birds

Entrance Orchard

- Proposed fruit trees to attract pollinators and provide habitat and foraging opportunities for birds

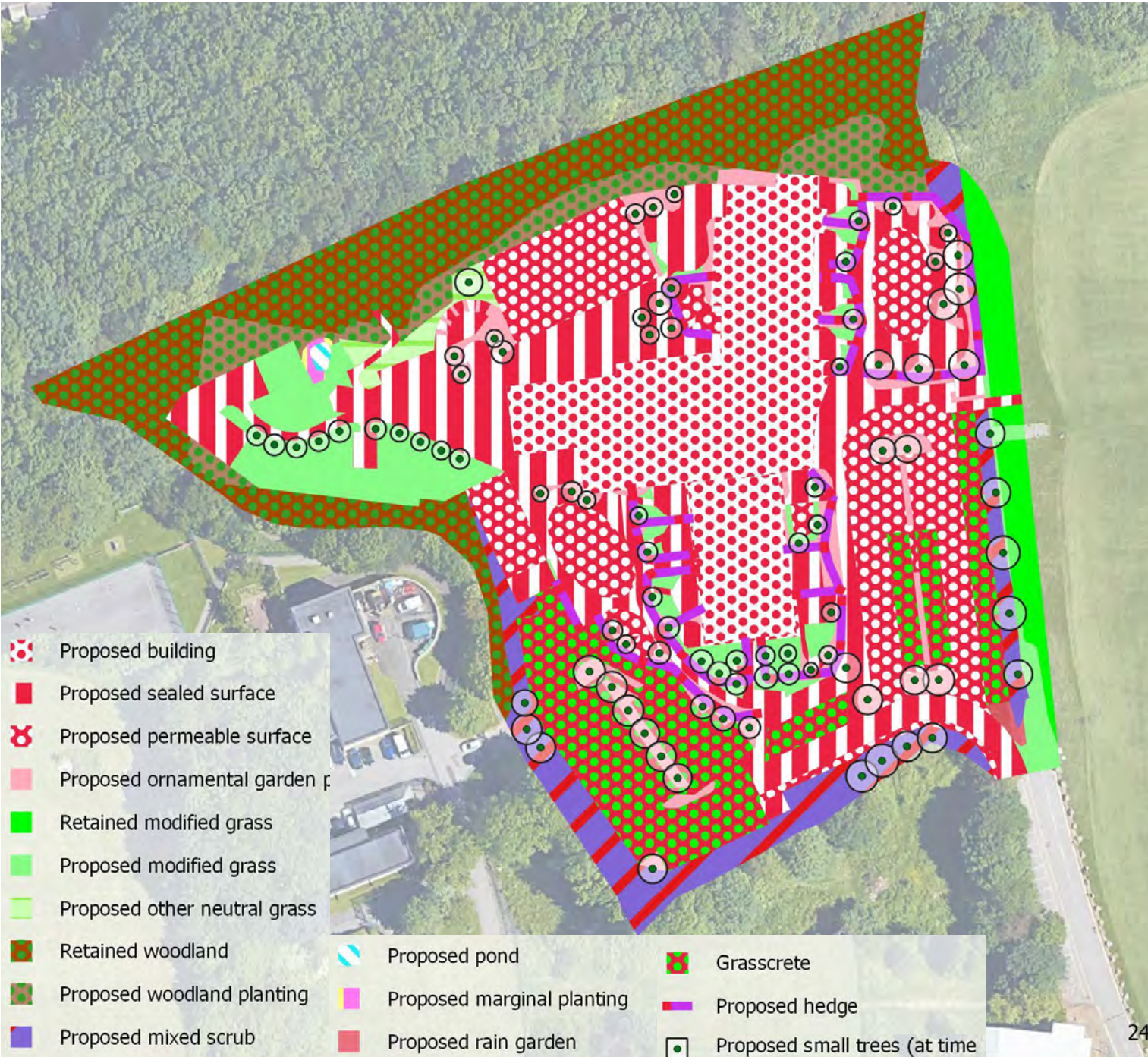


BIODIVERSITY NET GAIN

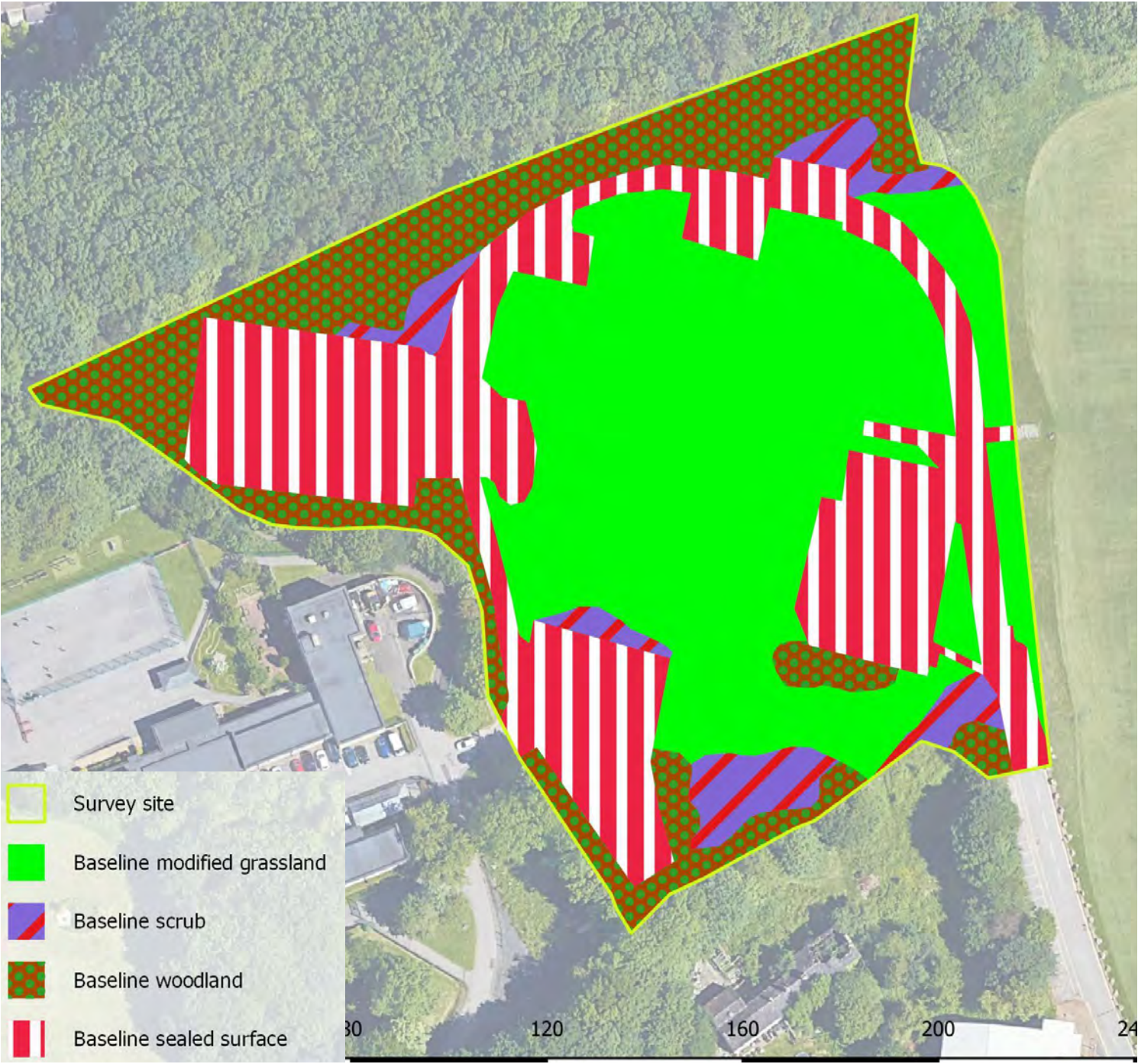
Biodiversity Net Gain (refer to BNG Report by Arbtech Consulting Ltd for details)

Arbtech Consulting Ltd were instructed by Frank Shaw Associates Ltd to undertake a Biodiversity Net Gain (BNG) evaluation of the site. The results of the metric are included in the excel file:
Biodiversity Metric 4.0 (Former Deighton Centre, HD2 1JP) v3.2

The results indicate a net gain in habitat area units (1.26 units) and a net gain in linear units (0.36 units). This is mainly contributed to replacement of part of the baseline grassland and some woodland and scrub areas with the proposed school site of buildings sealed and permeable surfaces, ornamental planting and grass areas, but compensated for with enhanced retained woodland condition on site, native scrub planting, proposed trees and the proposed planting of new hedgerows.



Proposed ecological map of the site (based on the site habitats in the metric)



Habitat baseline map

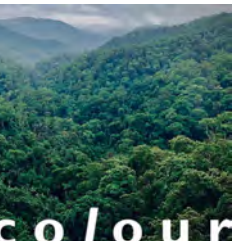
LANDSCAPE LAYOUT

LANDSCAPE LAYOUT

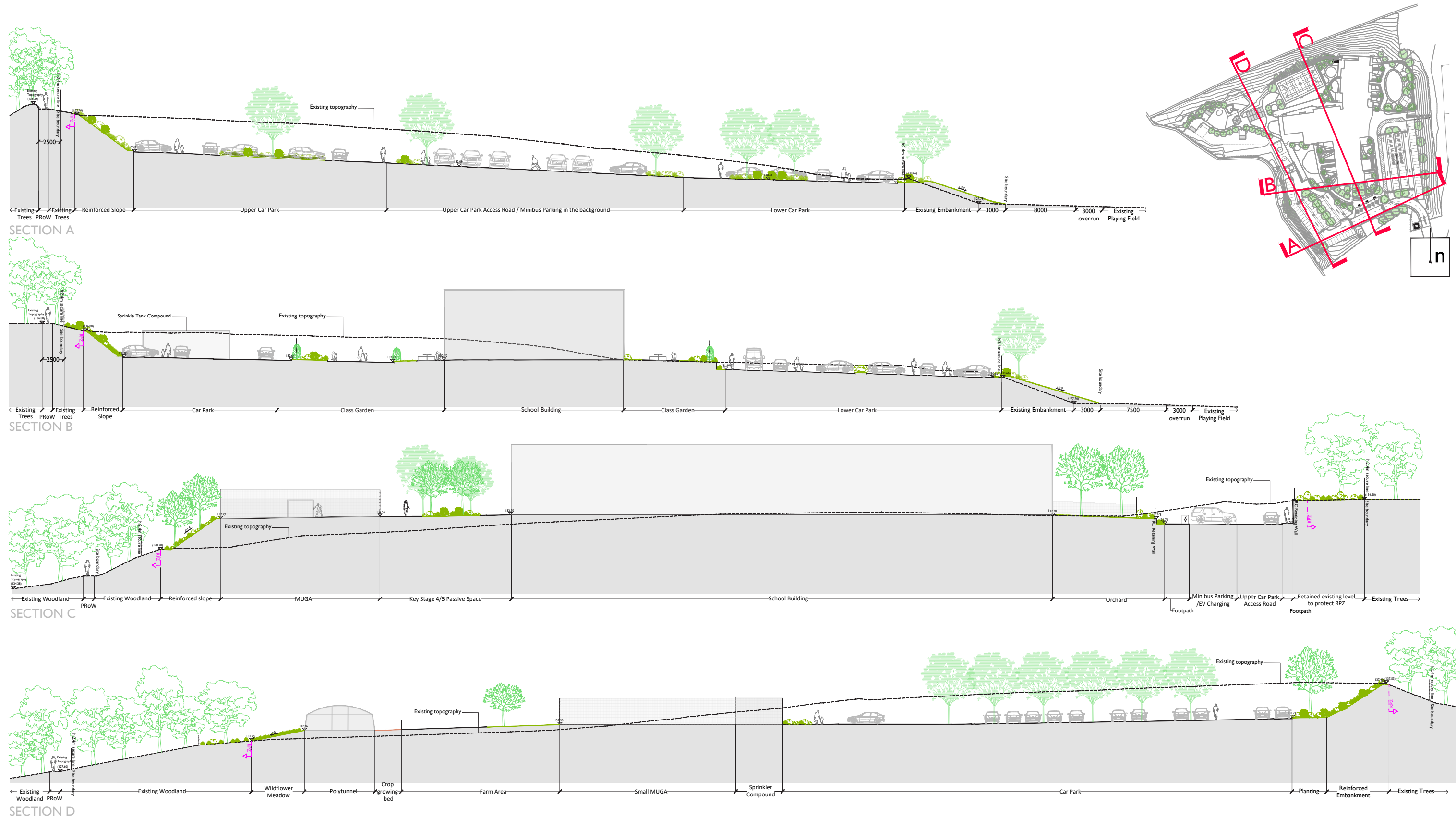
Joseph Norton
Academy
Deighton //
Landscape Statement



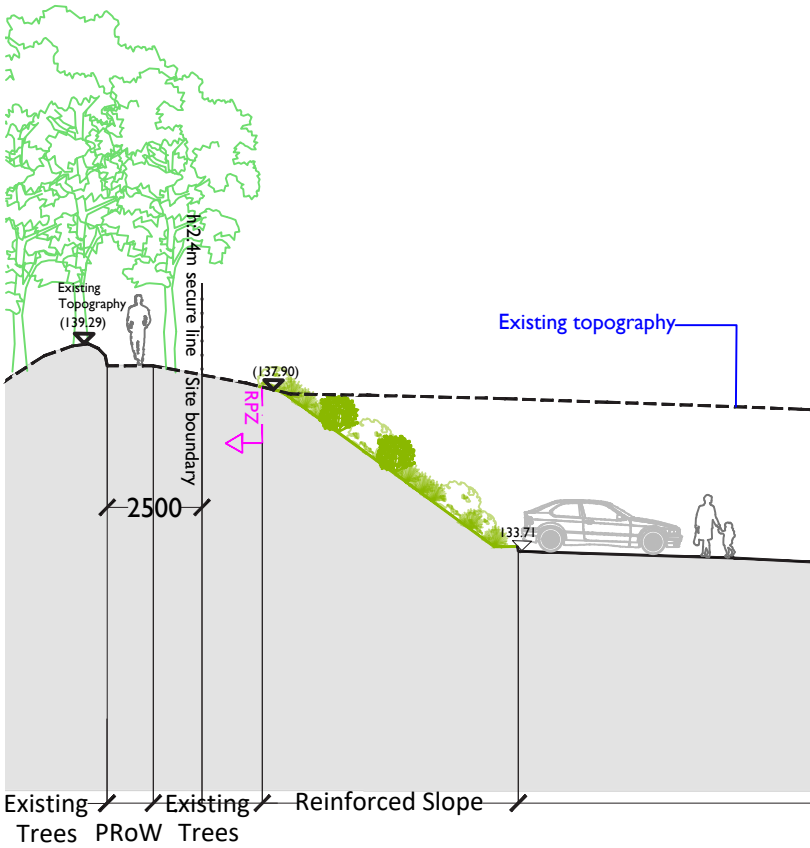
| Key | | | |
|---------|---|-----------|--|
| | Site Boundary | | |
| Paving | | | |
| | Textured Concrete Slab Paving with stone aggregates, colour: cream, 400x400x65mm (50mm thick at pedestrian areas) | | Porous Coloured Tarmac Surface, colours: buff, light blue |
| | Standard Concrete Block Paving 200x100x60mm colour: natural | | Polymeric Type 4 Sports Surface, porous, colour: light blue |
| | Permeable Concrete Block Paving 200x100x80mm colours: natural and charcoal | | Wet Pour Safety Surface colour: light blue |
| | Standard Concrete Pimple Paving 400x400x50mm colour: buff | | Woodchip Footpath, 150 mm thick layer |
| | Vehicular Tarmac Blacktop | | Gravel-filled Cellular Plastic Pavers with buff-coloured split gravel infill |
| Fencing | | Softworks | |
| | 3.0m Timber Slat/Weld-Mesh Fencing to Sprinkler Tank Compound | | Ornamental Shrub Planting |
| | 2.4m Timber Slat/Weld-Mesh Fencing to Bin Store | | Native Shrub Planting |
| | 2.0m Timber Featherboard Fencing as cladding to lower part of the 3.0m rebound fence at eastern side of MUGA | | Hedge Planting |
| | 3.0m Rebound Weld Mesh-Fencing to MUGA | | Amenity Grass Seeding |
| | 2.4m Anti-climb Weld Mesh-Fencing to outdoor play spaces & site perimeter | | Pre-grow, Fibre-reinforced Turf Grass |
| | 1.8m Anti-climb Weld Mesh-Fencing to Class Gardens | | Woodland Undergrowth Seeding |
| | 1.5m Anti-climb Weld Mesh-Fencing to Class Gardens | | Wildflower Meadow Seeding |
| | 1.2m Metal Balustrade on top of Retaining Walls | | Wetland / Pond Margin Seeding |
| | 0.9m Stainless Steel Handrail to Steps | | Grazing Pasture Seeding |
| | 1.5m Galvanised Wire Mesh-Fencing to Chicken Run and Goat Enclosures | | Existing Woodland to be improved |
| | 1.1m Galvanised Wire Mesh Fencing to Pig Enclosure with electric pasture tape to bottom | | Proposed Tree Planting |
| | 1.1m Timber Picket Fencing to Forest School and Vegetable Beds | | Existing Trees with Root Protection Zone (RPZ) dashed in blue |
| | | | Existing Trees to be removed |



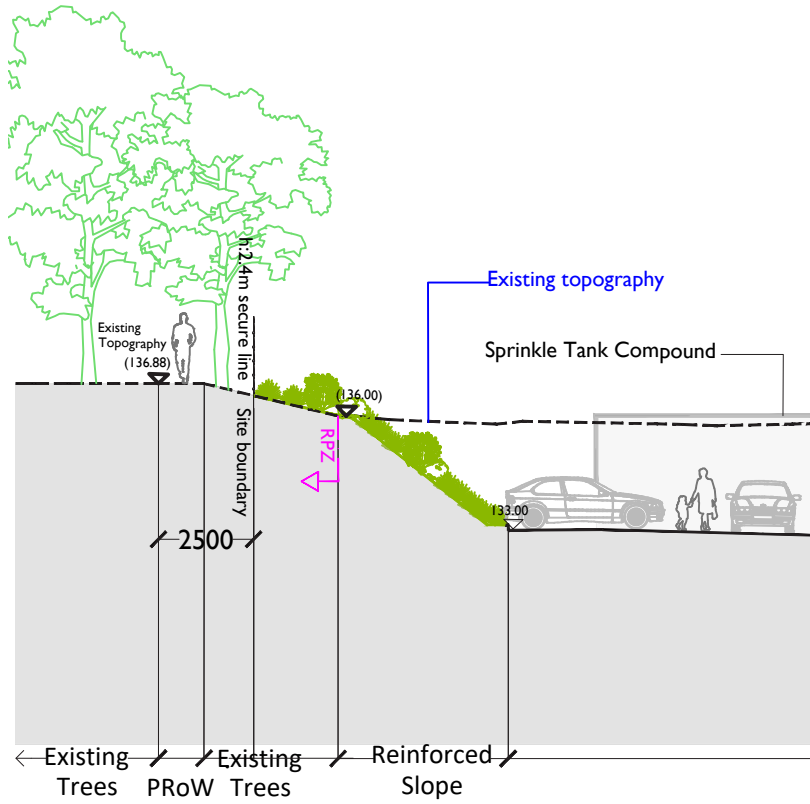
SITE SECTIONS



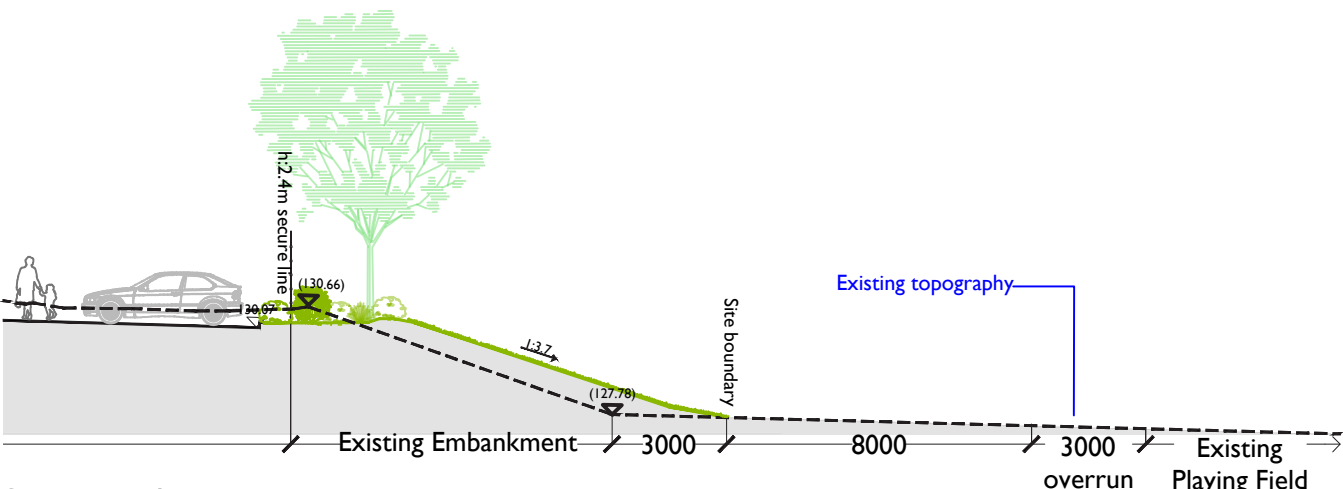
SECTIONS ALONG SITE BOUNDARY



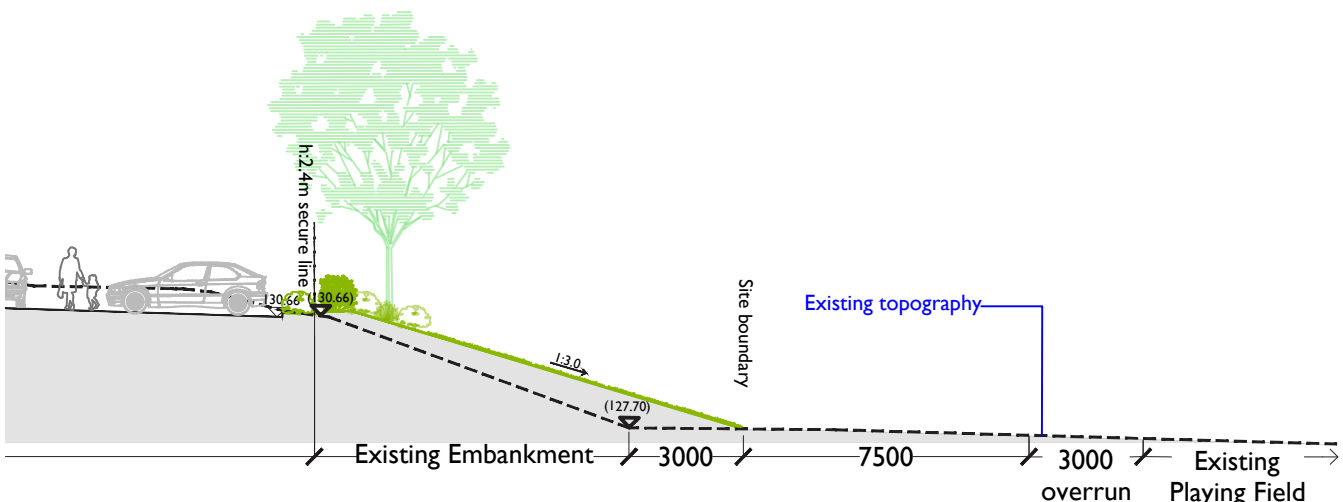
Section A - west



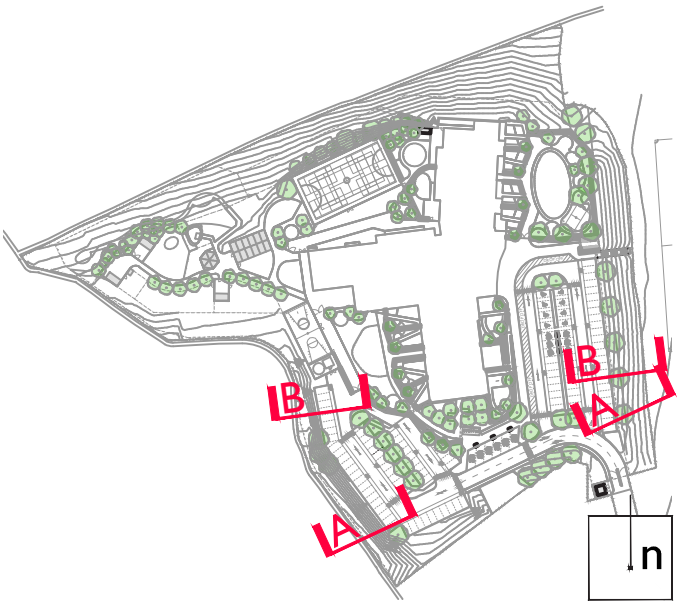
Section B - west



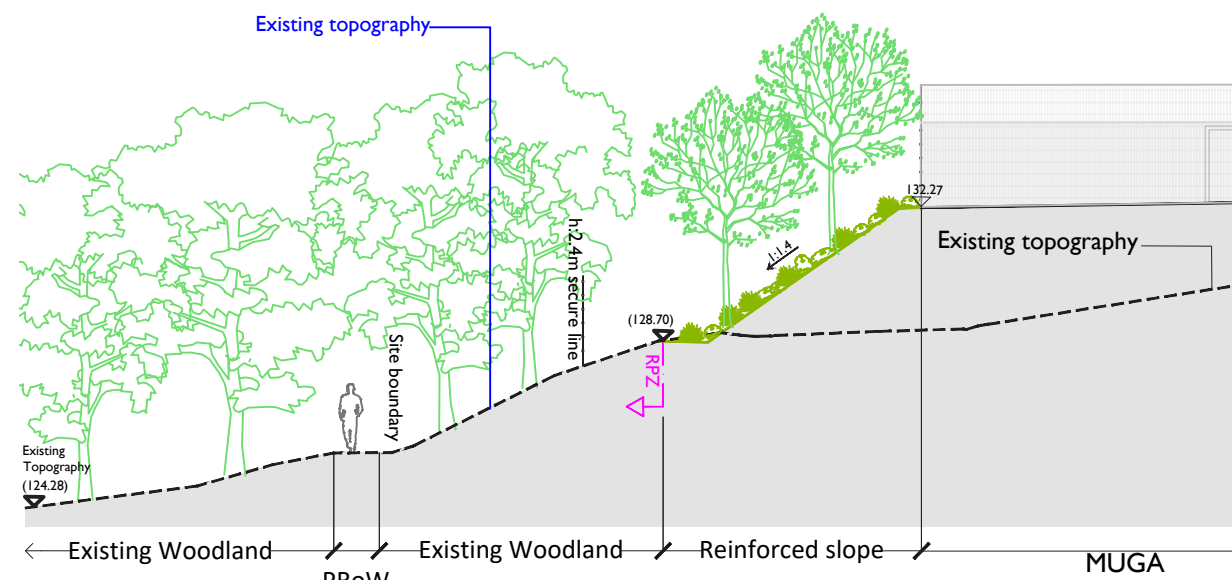
Section A - east



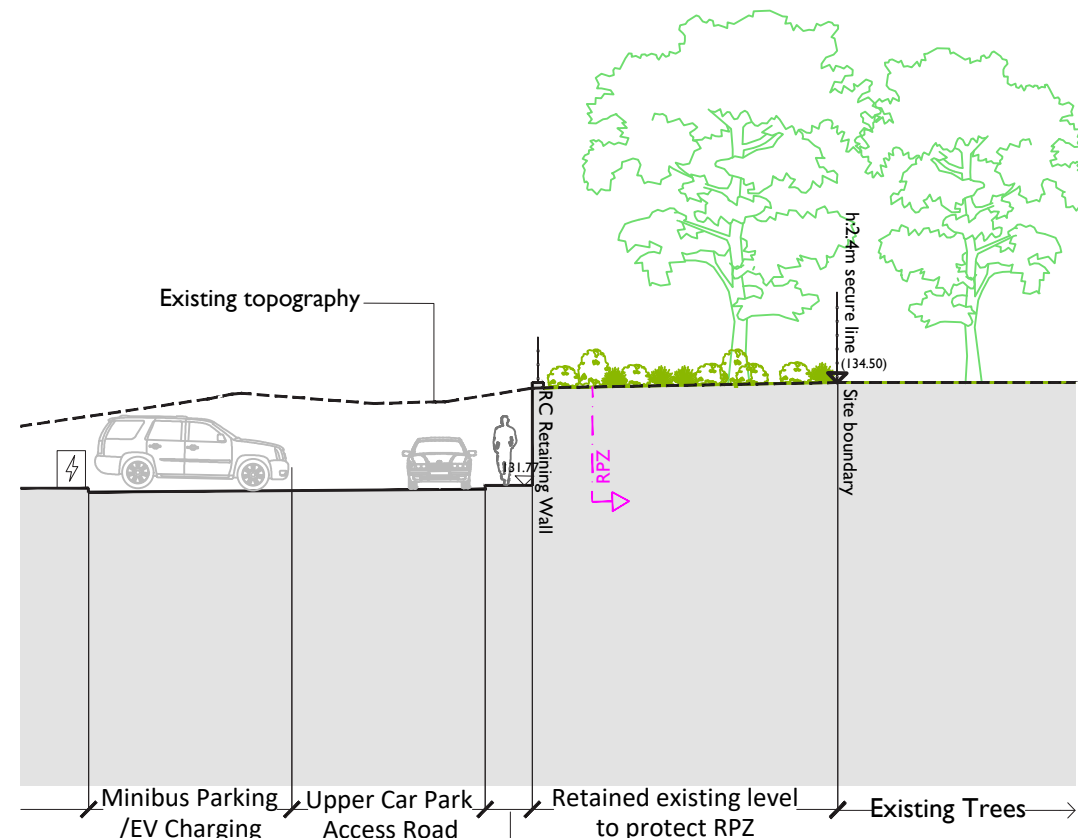
Section B - east



SECTIONS ALONG SITE BOUNDARY



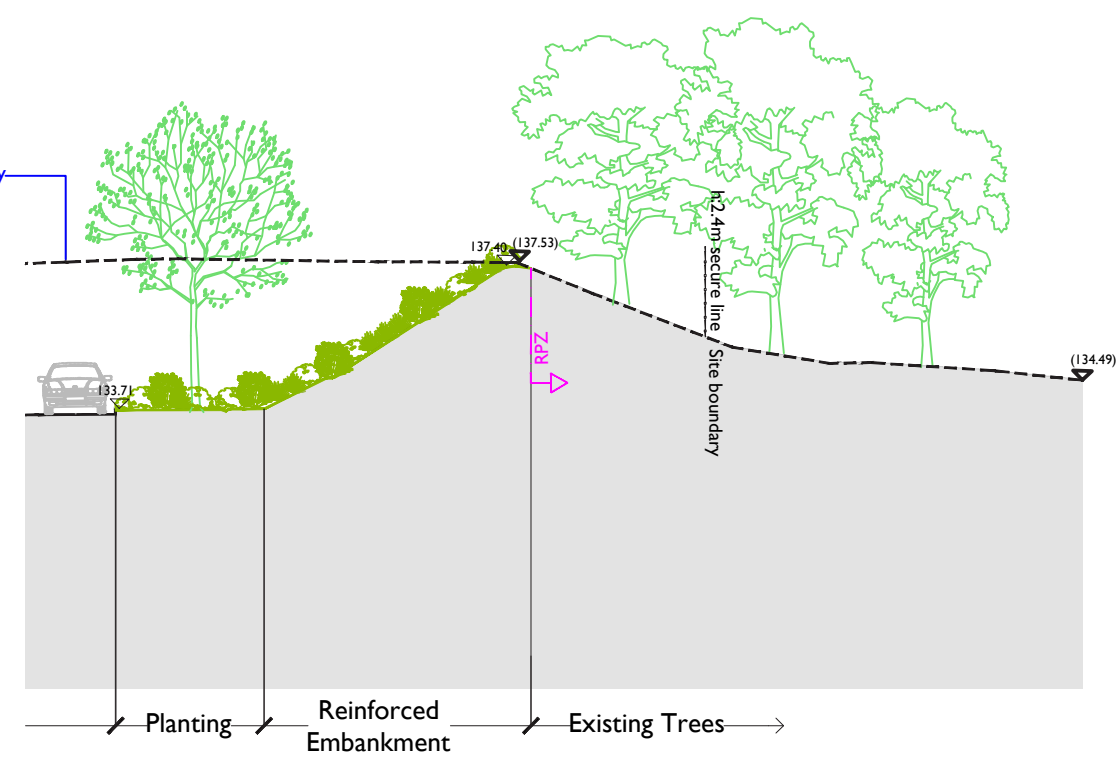
Section C - north



Section C - south



Section D - north

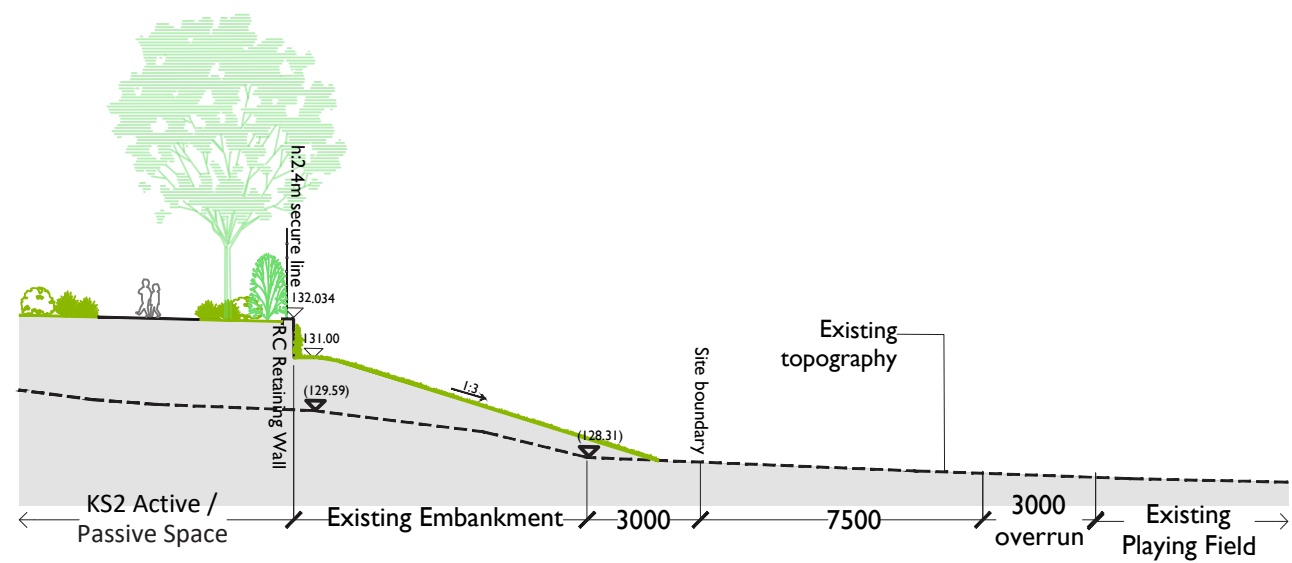


Section D - south

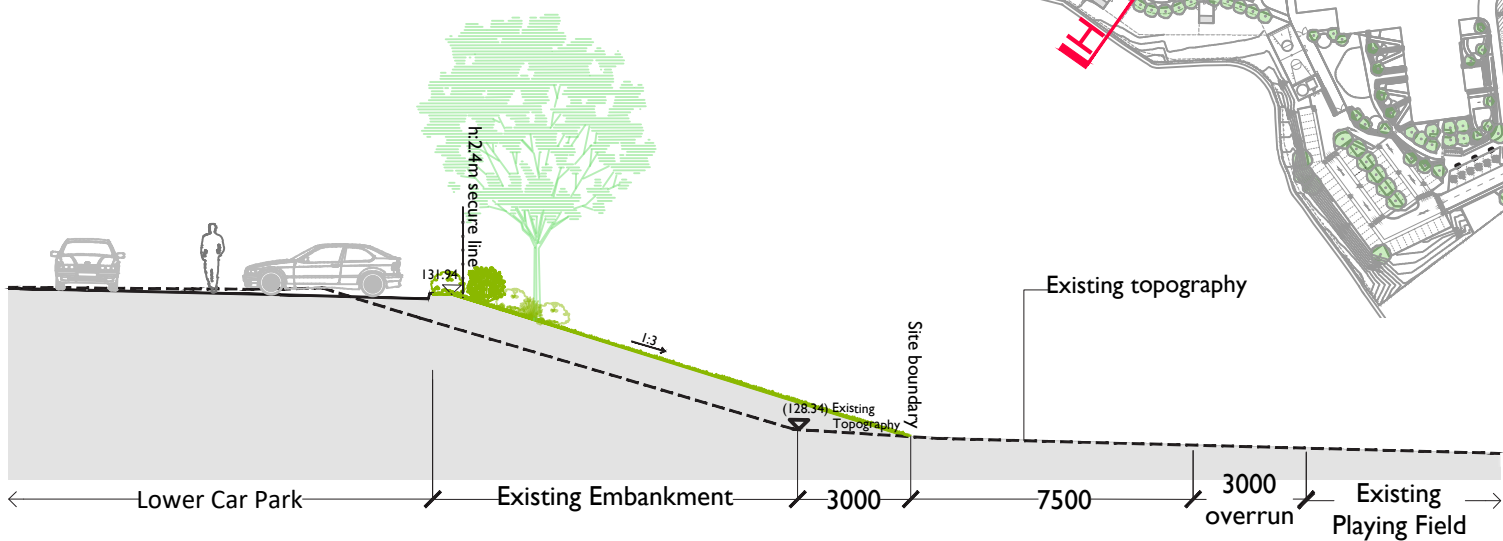




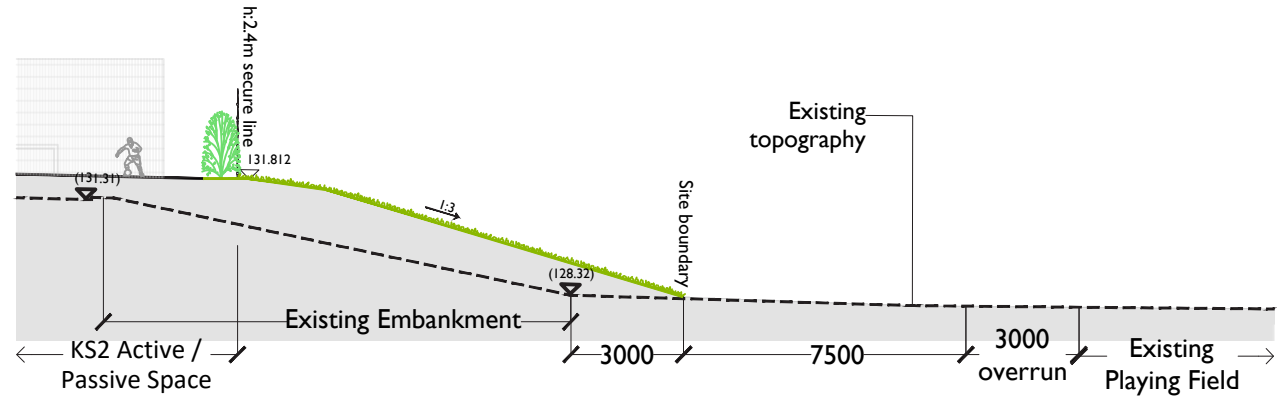
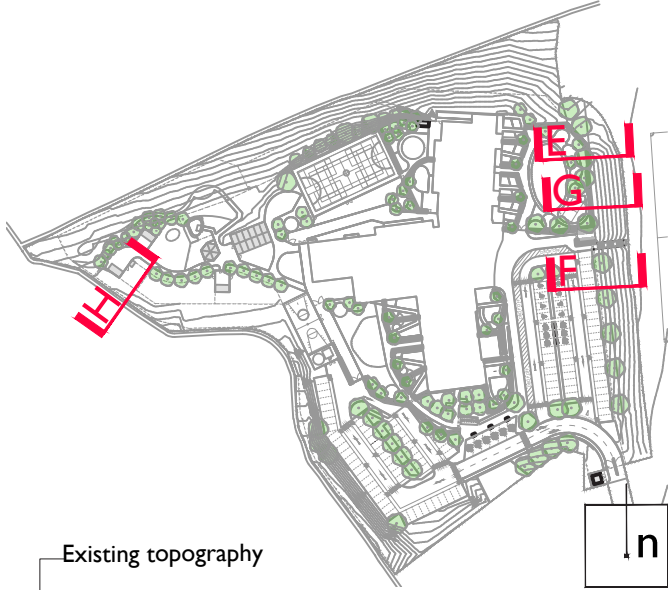
SECTIONS ALONG SITE BOUNDARY



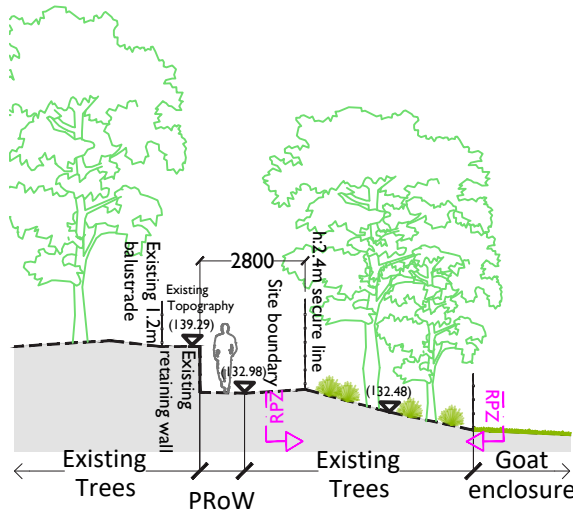
Section E



Section F



Section G



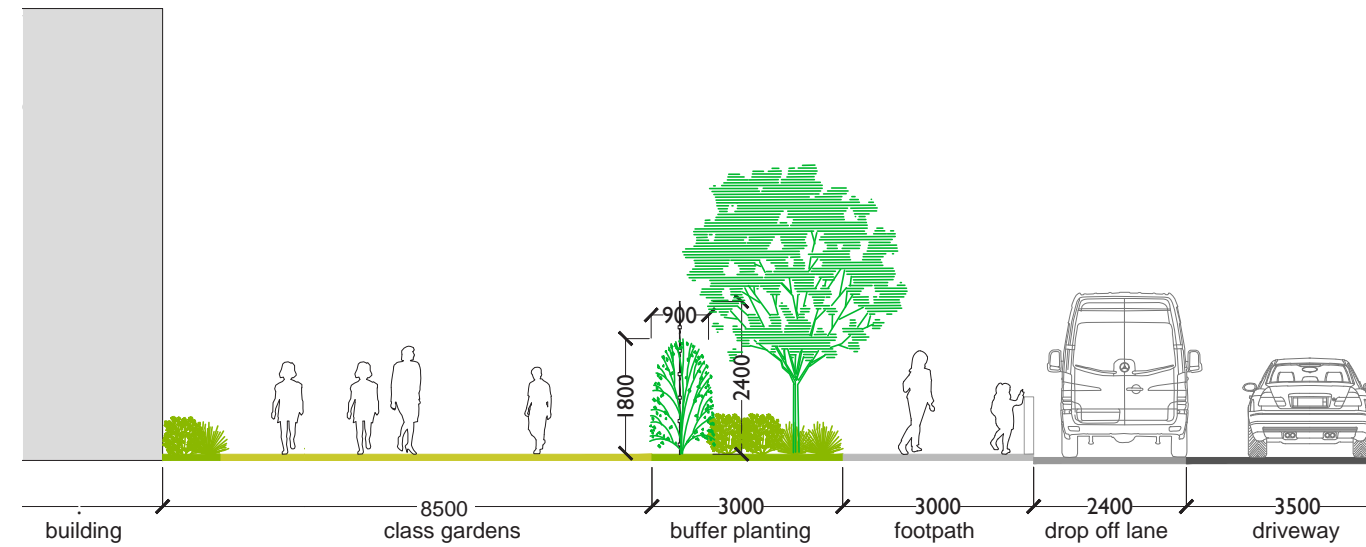
Section H



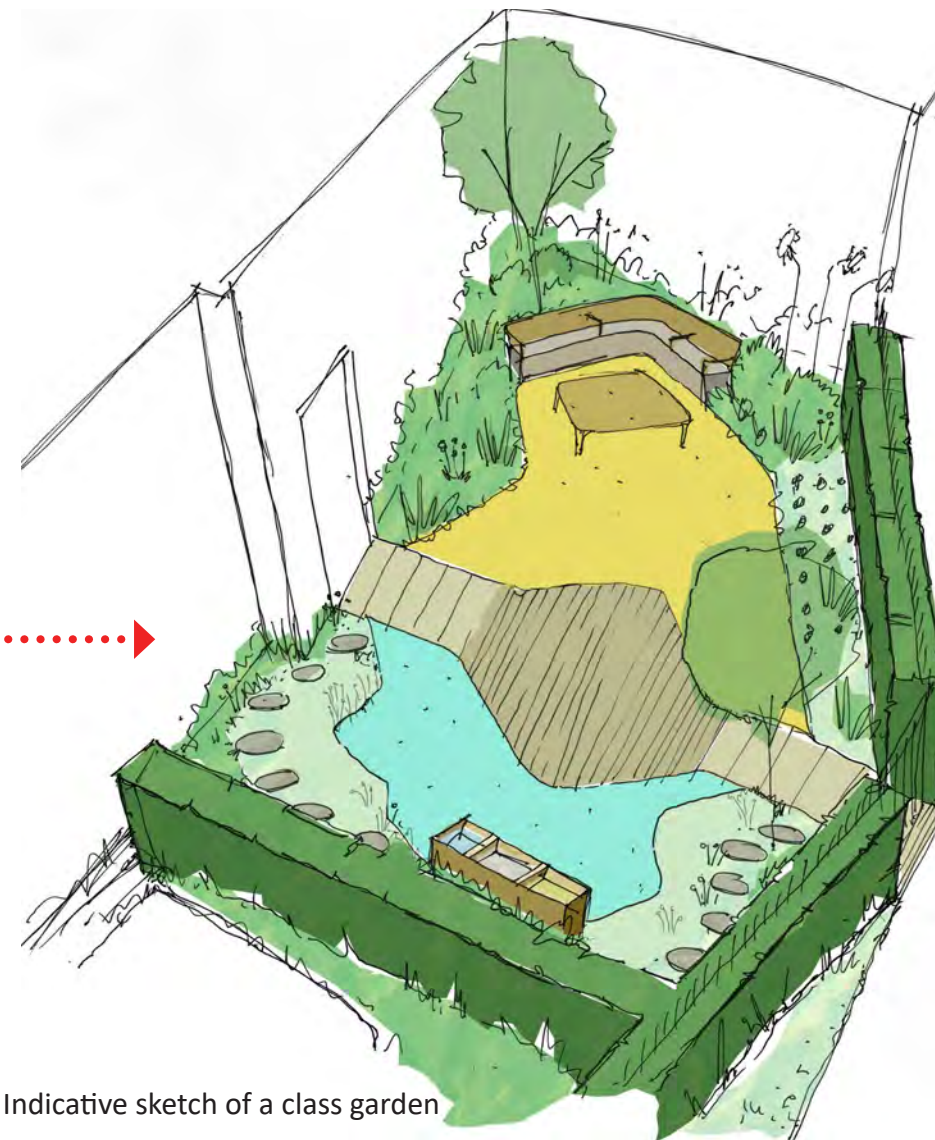


CLASS GARDENS

- Calm (NOT stimulating) views from inside to outside
- Outdoor extension of classrooms - each with its designated space for ownership
- Cover and seating for increased usage
- Quiet study
- Some growing
- Messy play for younger children
- Outdoor cooking possibility for older children
- Primarily fixed furniture
- Concrete slab and block route with wet-pour defining activity / seating spaces

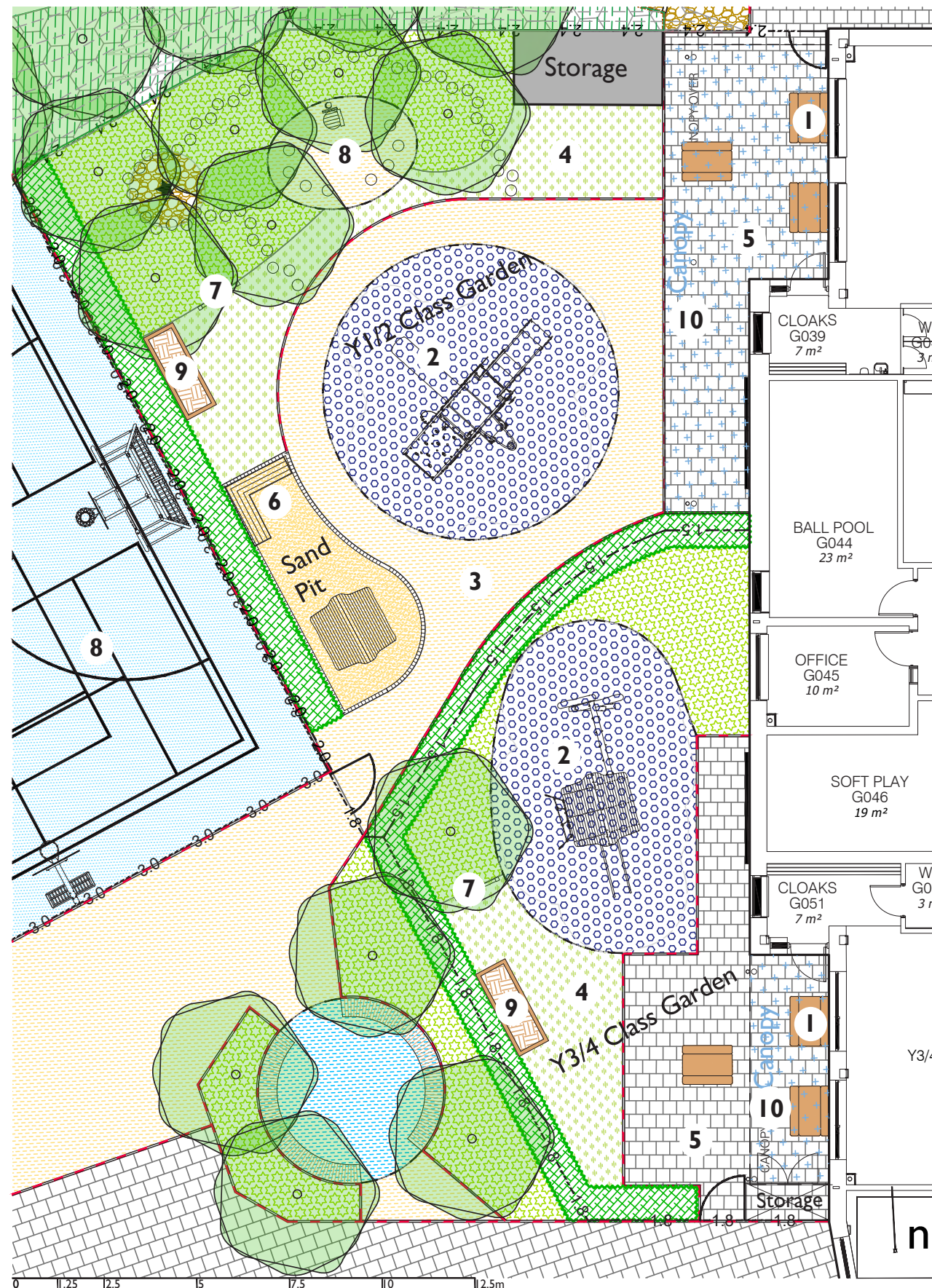


Typical Section A-A'



Indicative sketch of a class garden
to demonstrate scale

KS1 CLASS GARDENS (years 1/2 and 3/4)



Brief provided by Kirklees Council

- Active & passive space provision in the class garden.
- To look good and work year-round.
- Mud Kitchen.
- Messy play.
- Story telling space.
- Imaginative play opportunities.
- Cleanable.
- Allow for use year-round for much of the day (shelter).
- Routes for Wheeled toys - trikes etc.
- Sensory variety.
- Storage for wheeled toys, loose toys. Storage for wellies.
- Growing areas minimal.



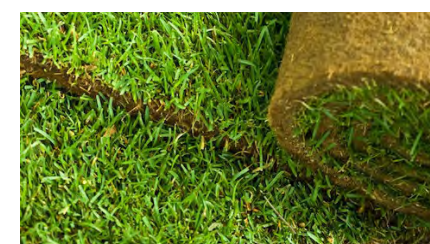
1 Children-sized table/ seats



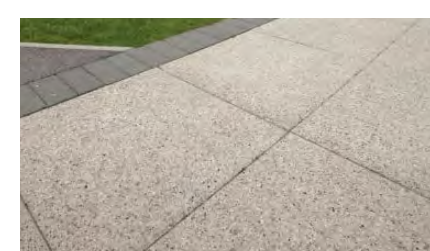
2 Wet-pour Safety Surface, skyblue



3 Light buff coloured Tarmac



4 Fibre-reinforced amenity turf



5 Textured Slab Paving



6 Mud Kitchen



7 Sensory Play



9 Crop growing

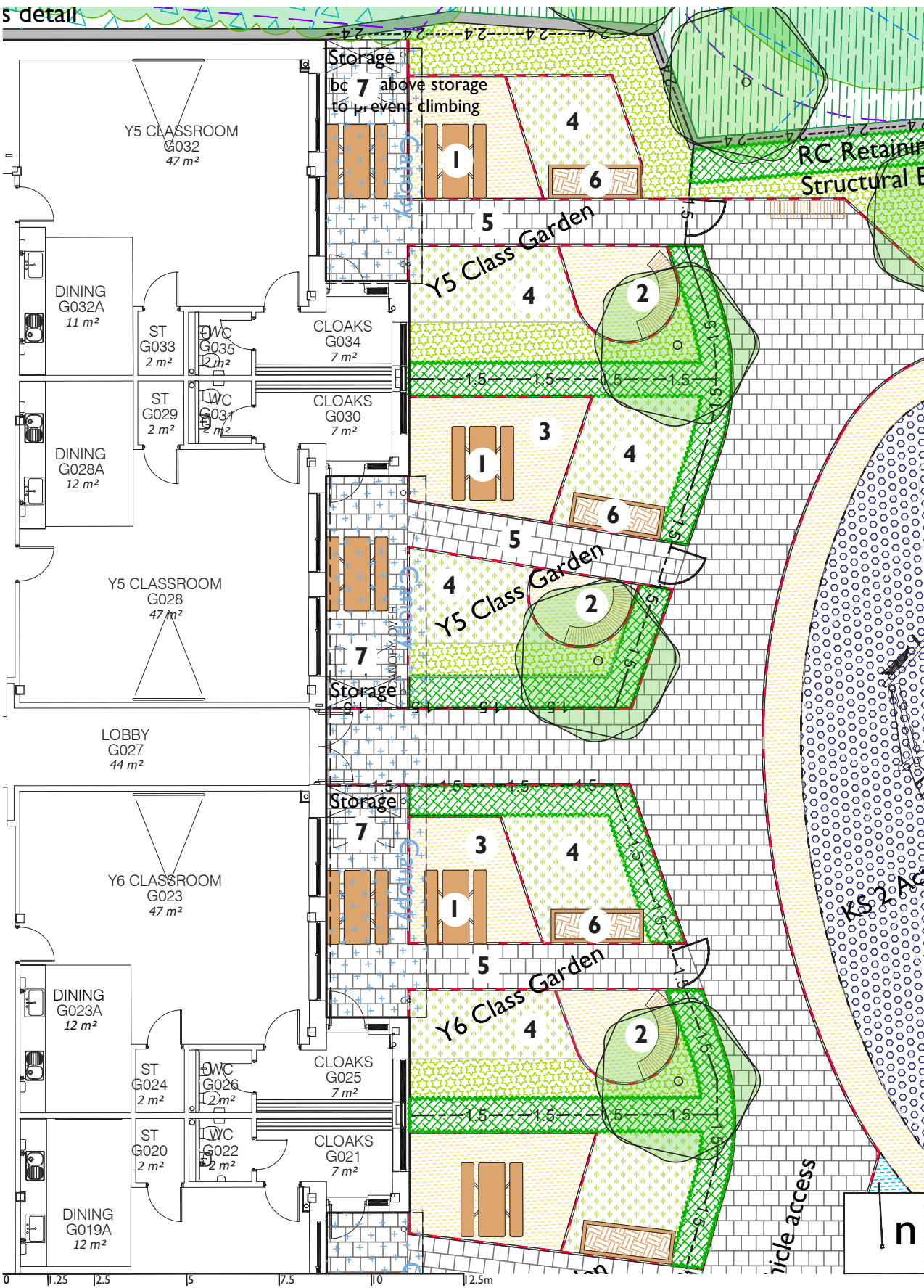


8 Story telling



10 Canopy

KS2 CLASS GARDENS (years 5 and 6)



- Brief provided by Kirklees Council
- To look good and work year-round
 - Important areas for growing multiple crops
 - Storage for tools and wellies

- Regulation space
 - Some messy play facilities.
 - Normally no use at break times.



1 Table/ seats



2 Bench



3 Light buff coloured Tarmac



4 Fibre-reinforced amenity turf



5 Textured Slab Paving



6 Crop growing



7 Storage

KS3 CLASS GARDENS (years 7 to 9)



Brief provided by Kirklees Council

- These three year 8 and 9 class gardens adjacent to the playground to be freely available for use at breaks.
- All six KS3 class gardens to have very clear use that is not an active use.
- Must especially not be attractive for playing ball games.
- Primary use as seating and passive activities in class and at breaks.
- No growing space required as this age group will use the farm.
- Important design is very suitable for sitting and having sanctuary.
- Design to be suitable for wide range of classroom learning.
- The school are considering using this class KS3 garden as an especially quiet zone for use of breaks by those children who will struggle with the busy playground.
- Important design is very suitable for sitting and having sanctuary.
- Design to be suitable for wide range of classroom learning.
- The school are considering using this class KS3 garden as an especially quiet zone for use of breaks by those children who will struggle with the busy playground.



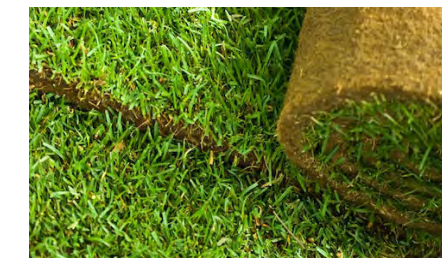
1 Table/ seats



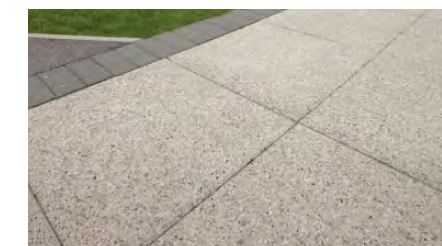
3 Light buff coloured Tarmac



2 Bench



4 Fibre-reinforced amenity turf




5 Textured Slab Paving

ACTIVE / PASSIVE OUTDOOR SPACES

Joseph Norton

Academy

Deighton //

Landscape Statement 

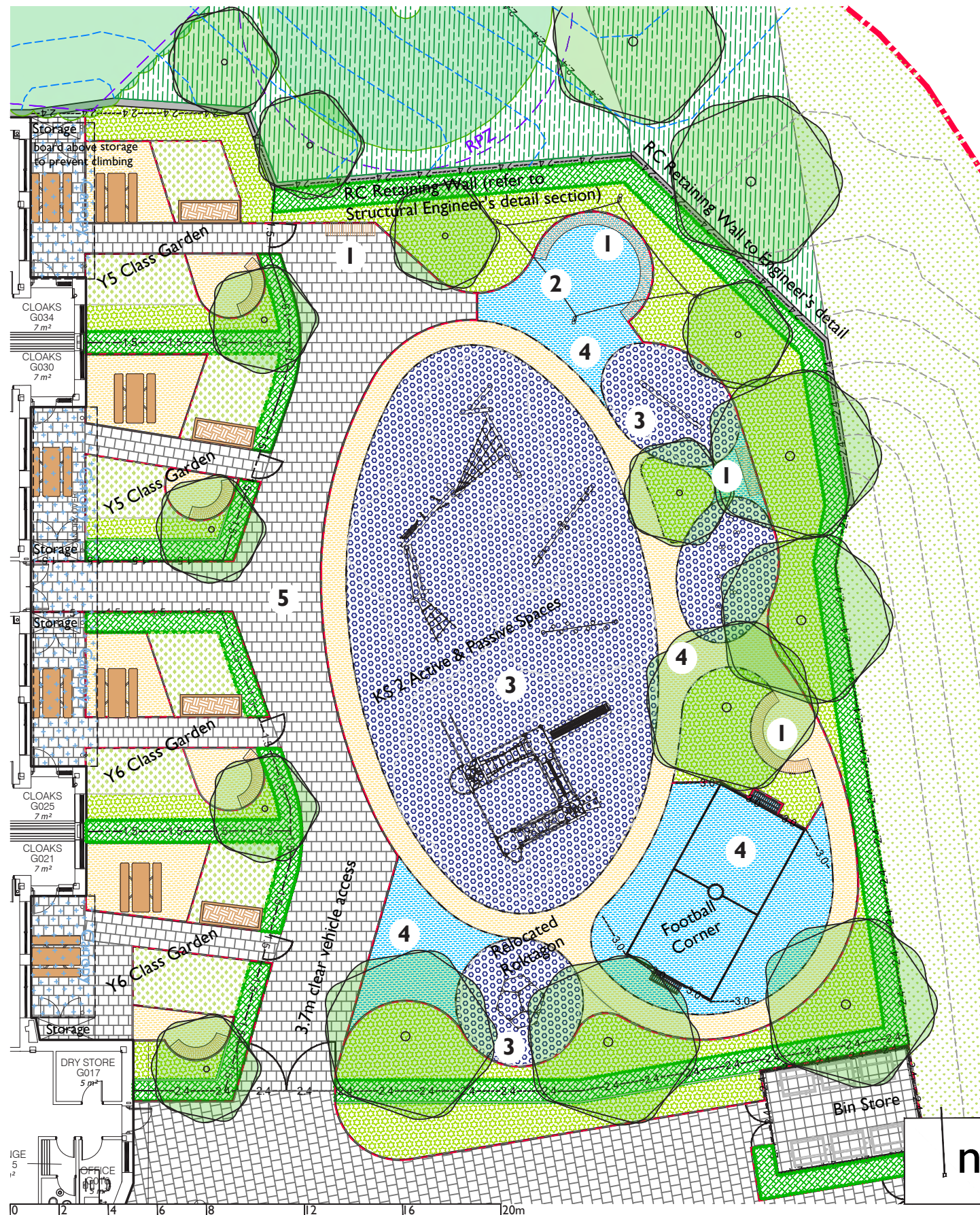


Aims

- Calming ambience in nature – biophilia
- Active and quiet passive areas
- Woodland backdrop and atmosphere
- Sensory environment – sound, smell, touch, movements, wildlife
- Teaching and learning opportunities
- Highlight the changes of season
- Collecting, measuring, counting, painting, stories
- Quiet decompression places - recovery
- Promote biodiversity with natural play
- Incidental play and physical engagement
- Track for learn to ride



KS2 ACTIVE / PASSIVE SPACES



1 Seating



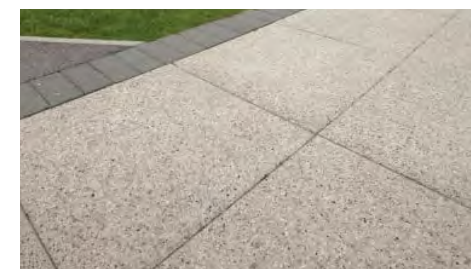
2 Sunshade sail



3 Wet-pour Safety Surface, skyblue



4 Light buff / blue coloured Tarmac

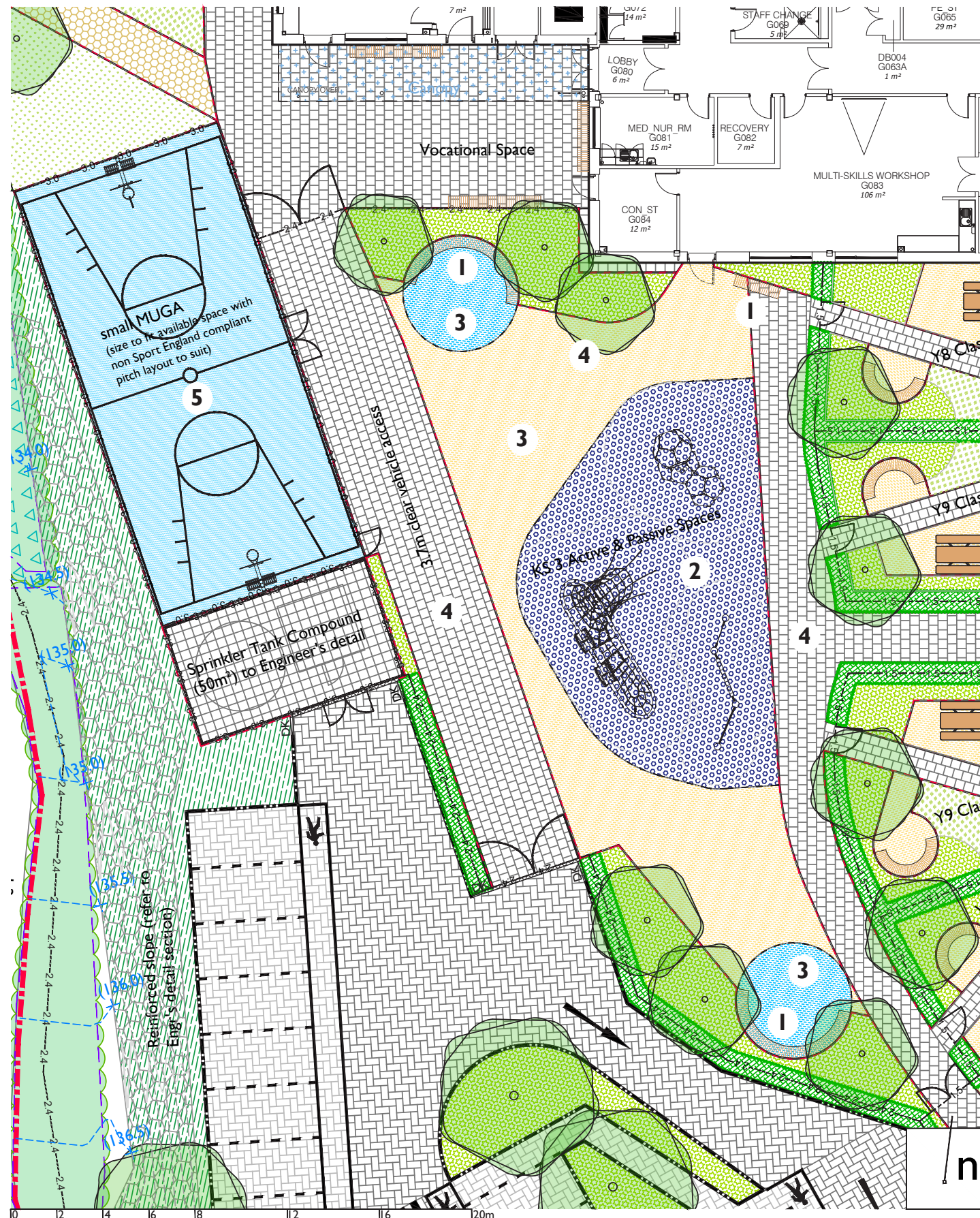


5 Textured Slab Paving

Brief provided by Kirklees Council

- Arena for seating larger groups and gatherings (incl. sunshade)
- Smaller quiet safe seating spaces
- Multi-play items for imaginative/ active play (incl. multiple levels, platforms, slide and climbing features)
- Imaginative play areas ideally that can be reimagined in multiple scenarios
- Swing suitable for multiple user, rocking items preferred
- Spinning items not required





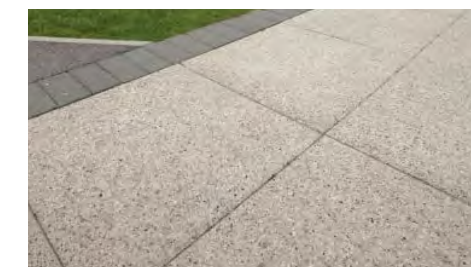
1 Seating



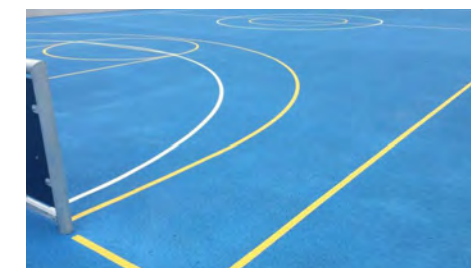
2 Wet-pour Safety Surface, skyblue



3 Light buff / blue coloured Tarmac



4 Textured Slab Paving



5 Polymeric Sports Surface

Brief provided by Kirklees Council

- Arena for seating larger groups and gatherings
- Smaller quiet safe seating spaces
- Multi-play items for imaginative/ active play (incl. multiple levels, platforms, slide and climbing features)
- Imaginative play areas ideally that can be reimagined in multiple scenarios
- Swing suitable for multiple user, rocking items preferred
- Spinning items not required



KS4+5 ACTIVE / PASSIVE SPACES



- Brief provided by Kirklees Council**
- Provide primarily seating and tables creating areas for multiple groups of students to go in.
 - Provide durable outdoor table tennis tables or similar.
 - Basketball and net ball nets to be considered in the MUGA at right angles to the football.
 - Consider if a secondary net might be put on the outside of the fence.



1 Table tennis



2 Polymeric Sports Surface



3 Light buff / blue coloured Tarmac



4 Textured Slab Paving



5 Seating



6 Table/ Seats

OUTDOOR LEARNING AREA & FOREST SCHOOL



1 Gravel-filled Cellular Plastic Pavers



2 Raised Crop Planting Beds



3 Pond Dipping Platform



4 Gazebo



10 Goat / Pig Shelter / Storage



9 Chicken Coop



8 Polytunnel



7 Pollarded Willow Tree Row



6 Forest School



5 Bug Hotel

BOUNDARY TREATMENTS

BOUNDARY TREATMENTS



1.1m Stainless Steel 316 double handrail to steps



1.2m Galvanised Steel Railing to top of retaining walls, Jacksons Fencing Steel Estate Railing or similar approved.



Timber Palisade Trim to Sand Pit, Unilog Pro machine-round treated timber Ø100mm x 800mm, or similar approved.

Timber Fencing



1.1m Timber Picket Fencing to Forest School and Vegetable Beds (latter with 600mm high rabbit-proof wire netting to the base), Jacksons Fencing Pointed Pale Palisade Fence or similar approved.



2.0m Timber Closeboard Fencing with gravel board to eastern side of MUGA, Jacksons Traditional Featherboard Fence, or similar approved.

Wire-Mesh Fencing



1.5m Galvanised Wire Mesh Fencing to Chicken Run and Goat Enclosure Jacksons Agricultural Fencing or similar approved.



1.1m Galvanised Wire Mesh Fencing to Pigs Enclosure (75-150mm mesh) with electric pasture tape to bottom, Jacksons Agricultural Fencing or similar approved.

Timber Slat Fencing



3.0m Timber Slat/Weld Mesh Fencing to Sprinkler Tank Compound, Jacksons Fencing EuroGuard Combi.

2.4m Timber Slat/Weld Mesh Fencing to Bin Store, Jacksons Fencing EuroGuard Combi.

Weld-Mesh Fencing



2.4m Anti-climb Weld Mesh Fencing as secure fence line to site perimeter and outdoor play spaces, Jacksons Fencing EuroGuard or similar approved.

1.8m Anti-climb Weld Mesh Fencing to upper years class gardens, Jacksons Fencing EuroGuard or similar approved.

1.5m Anti-climb Weld Mesh Fencing to lower years class gardens, Jacksons Fencing EuroGuard or similar approved.

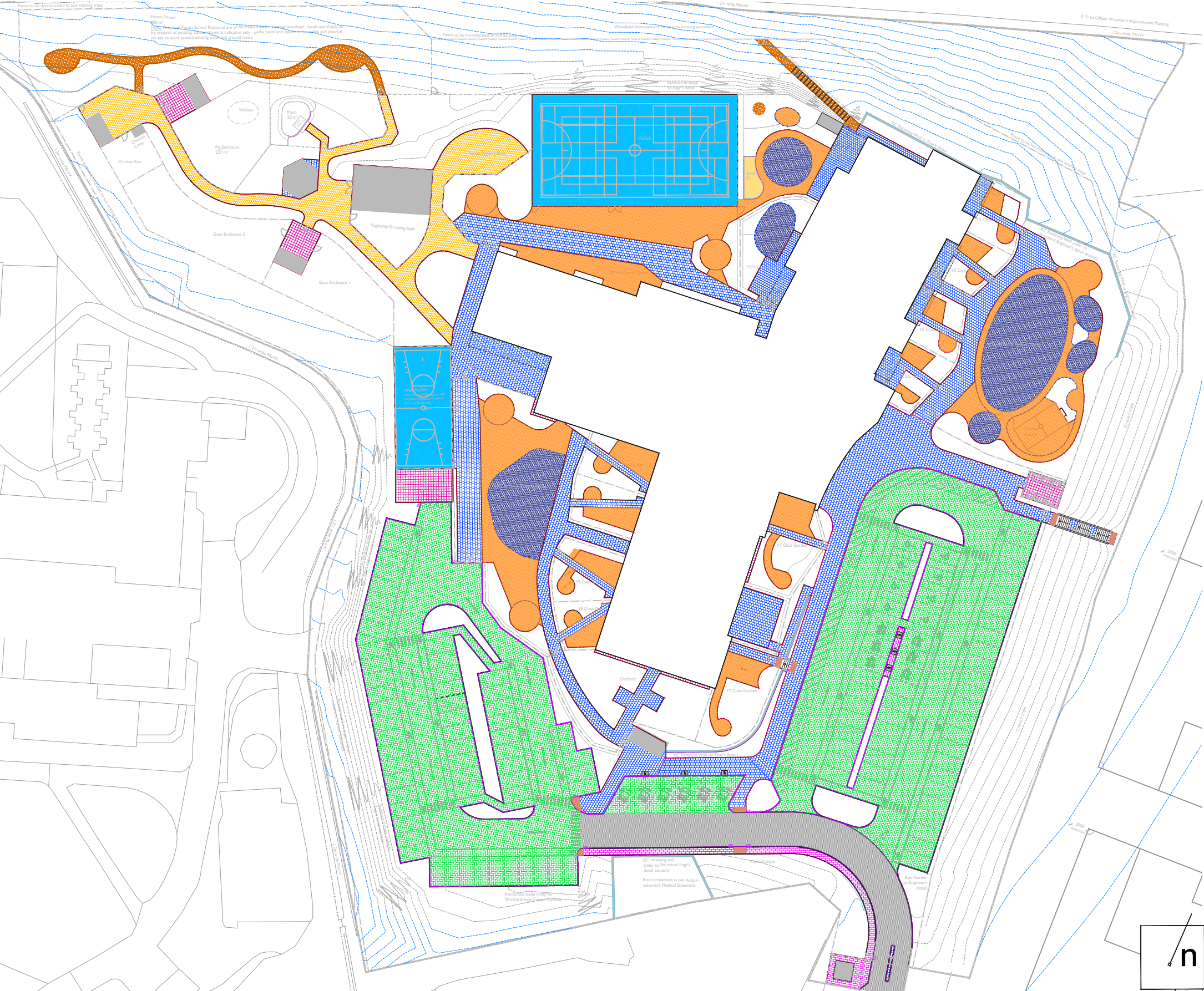


3.0m Rebound Weld Mesh Fencing to MUGA, Zaun Super Rebound Fence or similar approved.

A large, solid pink circle is positioned on the left side of the image, partially cut off by the edge. It serves as a background element for the text.

HARDWORKS STRATEGY

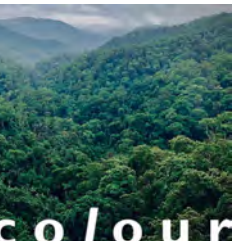
HARDWORKS STRATEGY



| Paving | | | |
|--------|---|--|---|
| | Textured Concrete Slab Paving with stone aggregates, colour: cream, 400x400x65mm (50mm thick at pedestrian areas) | | Standard Concrete Block Paving 200x100x60mm colour: natural |
| | Permeable Concrete Block Paving 200x100x80mm colours: natural and charcoal | | Standard Concrete Pimple Paving 400x400x50mm colour: buff |
| | Standard Tactile Slab Paving Blister/ Corduroy 400x400x50mm colour: charcoal | | Vehicular Tarmac Blacktop |
| | Porous Coloured Tarmac Surface, colours: buff and light blue | | Wet Pour Safety Surface colour: light blue |
| | Polymeric Type 4 Sports Surface, porous, colour: light blue | | Woodchip Footpath, 150 mm thick layer |
| | Gravel-filled Cellular Plastic Pavers with buff-coloured split gravel infill | | Play Sand Pit, 500 mm sand depth |
| Edging | | | |
| | Standard Concrete Road Kerb HB2 | | Standard Drop Kerb HB2 to BN2 |
| | Standard Concrete Flush Kerb BN2 | | Standard Pin Kerb 50mm wide, flat top |
| | Standard Concrete Pin Kerb 50mm wide, flat top | | 6 mm Steel Edging |
| | Timber Palisade Trim to Sand Pit, Ø100mm x 800mm | | Timber Log Edging to Woodbark Footpath |
| | RC Retaining Wall to Engineer's detail | | Timber Log Steps to Woodbark Footpath |

A large, solid pink circle that is partially cut off by the right edge of the frame, creating a semi-circular shape on the left side of the image.

PLANTING STRATEGY



PLANTING STRATEGY / ZONING








Key


Planting

-  Ornamental Shrub Planting
-  Active / Passive Outdoor Spaces
-  Native Shrub and Woodland Planting
-  Class Gardens
-  Existing Woodland to be improved

Seeding

- | | | |
|---|--|----------------------|
|  | Species-Rich Grazing Meadow Mix Habitat Aid Grazing Meadow Seed Mix | 4g / m ² |
|  | Pond Edge Mix Germinal WFG9 Wetland and Pond mix | 5g / m ² |
|  | Wildflower Meadow Mix Emorsgate EM3 Special General Purpose Meadow Mixture | 4g / m ² |
|  | Hedgerow Mix Emorsgate EM1 Hedgerow Mix | 4g / m ² |
|  | Grass Seeding Mix Germinal WFG20 Eco Species-rich Lawn | 10g / m ² |

Turfing

- 
- Hard-wearing fibre-reinforced Amenity Grass**
 ABG Advanced Turf Rootzone Reinforcement
 System with Lindum LT8 Festival Plus Turf



CLASS GARDEN PLANTING





Aims


- Provide a safe and calming green outdoor space to every groundfloor classroom.
- Provide a green calming view out of the classroom throughout the seasons.
- Provide a screen to mitigate distraction from beyond the class garden.
- Provide a secure fence line softened and masked by hedges and climbers.
- Sensory planting for pupils to interact with.
- Trees to provide structure and shade.


Requirements

- Avoid poisonous plants or any which can cause health issues or injury.
- Robust and low maintenance planting.
- Sensory plants (appearance, colour, fragrance, texture) which are gently stimulating but without being overstimulating.
- Plants benefiting biodiversity & pollinators.
- A good proportion of evergreen plants for green aspects throughout the year.

 Shrub Planting



 Trees
Prunus 'Shogetsu'

 Hedge to fence
Elaeagnus x ebbingei
Griselinia littoralis 'Green Hedgemaster'

 Hard-wearing fibre-reinforced Amenity Grass
ABG Advanced Turf Rootzone Reinforcement
System with Lindum LT8 Festival Plus Turf


n


CLASS GARDEN PLANTING


| Trees | Key | Girth cm | Height cm | Root Zone | Specification |
|---|---|-----------|-----------|---------------|--|
| Prunus 'Shogetsu' | PS* | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks; underground rootball guying system |
| Note: Tree symbols marked with * = trees with Underground Guying System (refer to NBS spec Q31.526 and drawing L-2352-DE-4003, detail section U) | | | | | |
| Hedge to fence | | Height cm | | Density per m | Specification |
| Griselinia littoralis 'Green Hedgemaster' |  | 120-150cm | | 2 | Pot grown, 20L pot |
| Elaeagnus x ebbingei |  | 120-150cm | | 2 | Pot grown, 20L pot |


| Planting Mixture (100%) | | Ratio | | | |
|-------------------------------------|----|-----------|----------|----------------|-----------------|
| Shrubs | % | Height cm | Pot size | Density per m2 | Specification |
| Choisya ternata | 10 | 40-60 | 3L | 3 | Bushy; 4 breaks |
| Hebe 'Green Globe' | 10 | 20-30 | 3L | 4 | Bushy; 5 breaks |
| Sarcococca confusa | 10 | 3L | 3L | 4 | Bushy 7 breaks |
| Skimmia x confusa 'Kew Green' | 10 | 3L | 3L | 4 | Bushy 3 breaks |
| Herbaceous | | Pot size | | Density per m2 | |
| Alchemilla mollis | 6 | 0.5L | | 7 | |
| Geranium macrorrhizum 'Spessart' | 6 | 0.5L | | 7 | |
| Thymus serpyllum 'Elfin' | 6 | 0.5L | | 8 | |
| Thymus vulgaris 'Compactus' | 6 | 0.5L | | 8 | |
| Tiarella cordifolia 'Moorgrün' | 6 | 2L | | 5 | |
| Grasses | | Pot size | | Density per m2 | |
| Briza media | 6 | 2L | | 6 | |
| Deschampsia 'Goldtau' | 6 | 2L | | 3 | |
| Festuca gautieri | 6 | 0.5L | | 9 | |
| Pennisetum thunbergii 'Red Buttons' | 6 | 2L | | 3 | |
| Stipa tenuissima | 6 | 2L | | 5 | |


Shrubs/ herbaceous species



Choisya ternata



Hebe 'Green'



Sarcococca confusa



Skimmia x confusa 'Kew Green'



Thymus vulgaris 'Compactus'


Thymus serpyllum 'Elfin'


Geranium macrorrhizum 'Spessart'


Vinca major


Alchemilla mollis


Tiarella cordifolia 'Moorgrün'

Trees


Prunus 'Shogetsu'

Hedge to fence


Griselinia littoralis 'Green Hedgemaster'

Reinforced Turf


ABG Advanced Turf Rootzone Reinforcement System with Lindum LT8 Festival Plus Turf
Elaeagnus x ebbingei (to east-facing class gardens)

Grasses


Stipa tenuissima


Deschampsia 'Goldtau'


Briza media


Pennisetum thunbergii 'Red Buttons'

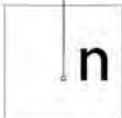
ACTIVE/PASSIVE OUTDOOR SPACE PLANTING



- Aims**
- Provide a safe and green outdoor environ-ment for play as well as passive use.
 - Provide a sensory planting for pupils to interact with, but at the same time creating a calming environment.
 - Provide a screen to mitigate distraction from beyond the school compound.
 - Provide a secure fence line softened and masked by shrub planting, hedges and trees.
 - Trees to provide structure and shade.
- Requirements**
- Avoid poisonous plants or any which can cause health issues or injury.
 - Robust and low maintenance planting.
 - Sensory plants (appearance, colour, fragrance, texture) which are gently stimulating but without being overstimulating.
 - Plants benefiting biodiversity & pollinators.
 - A good proportion of evergreen plants for green aspects throughout the year.

Shrub Planting

| Trees | Key |
|---|-----|
| Acer campestre 'Streetwise' | Ac* |
| Acer saccharum | As* |
| Betula papyrifera | Bp* |
| Prunus avium 'Plena' | Pa* |
| Tilia cordata 'Greenspire' | Tc* |
| Hedge | |
| Griselinia littoralis 'Green Hedgemaster' | |
| Elaeagnus x ebbingei | |





ACTIVE/PASSIVE OUTDOOR SPACE PLANTING

| Trees | Key | Girth cm | Height cm | Root Zone | Specification |
|-----------------------------|-----|----------|-----------|-----------|--|
| Acer campestre 'Streetwise' | | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks; underground rootball guying system |
| Acer saccharum | | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks; underground rootball guying system |
| Betula papyrifera | | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks; underground rootball guying system |
| Prunus avium 'Plena' | | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks; underground rootball guying system |
| Tilia cordata 'Greenspire' | | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks; underground rootball guying system |

Note: Tree symbols marked with * = trees with Underground Guying System (refer to NBS spec Q31.526 and drawing L-2352-DE-4003. detail section U)

| Hedge | | Height cm | Density per m | Specification |
|---|--|-----------|---------------|--------------------|
| Griselinia littoralis 'Green Hedgemaster' | | 120-150cm | 2 | Pot grown, 20L pot |
| Elaeagnus x ebbingei | | 120-150cm | 2 | Pot grown, 20L pot |

| Planting Mixture (100%) | Ratio | | | | |
|-------------------------------------|-------|-----------|----------------|----------------|-----------------|
| Shrubs | % | Height cm | Pot size | Density per m2 | Specification |
| Choisya ternata | 5 | 40-60 | 3L | 3 | Bushy; 4 breaks |
| Sarcococca confusa | 10 | 3L | 3L | 4 | Bushy 7 breaks |
| Hebe 'Green Globe' | 5 | 20-30 | 3L | 4 | Bushy; 5 breaks |
| Lavandula x angustifolia 'Hidcote' | 6 | 15-20 | 2L | 4 | Bushy; 5 breaks |
| Lonicera nitida 'May Green' | 5 | 30-40 | 2L | 3 | Bushy; 3 breaks |
| Rosmarinus officinalis 'Blue Boy' | 5 | 30-40 | 3L | 3 | Bushy; 4 breaks |
| Skimmia x confusa 'Kew Green' | 10 | 3L | 3L | 4 | Bushy 3 breaks |
| Herbaceous | | Pot size | Density per m2 | | |
| Ajuga reptans 'Catlin's Giant' | 10 | 0.5L | 8 | | |
| Geranium macrorrhizum 'Spessart' | 15 | 0.5L | 7 | | |
| Grasses | | Pot size | Density per m2 | | |
| Briza media | 8 | 2L | 6 | | |
| Deschampsia 'Goldtau' | 8 | 2L | 3 | | |
| Pennisetum thunbergii 'Red Buttons' | 8 | 2L | 3 | | |
| Stipa calamagrostis 'Lemperg' | 8 | 2L | 3 | | |
| Stipa tenuissima | 10 | 2L | 5 | | |



Betula papyrifera



Acer saccharum



Prunus avium 'Plena'



Skimmia x confusa 'Kew Green'



Acer campestre 'Streetwise'



Tilia cordata 'Green Spire'



Griselinia littoralis 'Hedgemaster'



Lonicera nitida 'May Green'



Sarcococca confusa



Rosmarinus officinalis 'Blue Boy'



Geranium macrorrhizum 'Spessart'



Choisya ternata



Hebe 'Emerald Green'



Ajuga reptans 'Catlin's Giant'



Lavandula x angustifolia 'Hidcote'



Briza media



Pennisetum thunbergii 'Red Buttons'



Deschampsia 'Goldtau'



Stipa tenuissima



Stipa calamagrostis 'Lemperg'

ORNAMENTAL SHRUB PLANTING



Aims

- Benefit biodiversity and SuDS.
- Soften an extensive car park to avoid an ‘institutional’ impression of the space.
- Provide a welcoming and calming approach to the school.
- Provide green views from the upper floor classrooms.
- Trees to provide structure and shade.
- Fruit trees to provide a flowering aspect in spring and the opportunity for fruit harvesting.

Requirements

- Avoid poisonous plants or any which can cause health issues or injury in proximity of students drop-off and along circulation routes.
- Robust and low maintenance planting.
- Plants benefiting biodiversity & pollinators.
- A good proportion of evergreen plants for green aspects throughout the year.

Shrub Planting

| Trees | Key |
|---|-----|
| Acer campestre ‘Streetwise’ | Ac |
| Malus domestica ‘Cox’s Self Fertile’ | Mc |
| Malus domestica ‘Egremont Russet’ | Me |
| Malus domestica ‘Sunset’ | Ms |
| Carpinus betulus | Cb |
| Prunus avium ‘Plena’ | Pā |
| Prunus domestica ‘Reine-Claude D’Oullins’ | Pd |
| Prunus padus ‘Albertii’ | Pp |
| Pyrus communis ‘Conference’ | Pc |
| Sorbus aucuparia ‘Sheerwater Seedling’ | Sō |
| Tilia cordata ‘Greenspire’ | Tc |

ORNAMENTAL SHRUB PLANTING



| Trees | Key | Girth cm | Height cm | Root Zone | Specification |
|--|-----|----------|-----------|-----------|--|
| Acer campestre 'Streetwise' | A'c | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks |
| Malus domestica 'Cox's Self Fertile' | Mc | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks |
| Malus domestica 'Egremont Russet' | Me | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Malus domestica 'Sunset' | Ms | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Carpinus betulus | Cb | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Prunus avium 'Plena' | Pa | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Prunus domestica 'Reine-Claude D'Oullins' | Pd | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Prunus padus 'Albertii' | Pp | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Pyrus communis 'Conference' | Pc | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Sorbus aucuparia 'Sheerwater Seedling' | So | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks |
| Tilia cordata 'Greenspire' | Tc | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks |
| Salix alba (willow trees to be regularly pollarded to provide goat food) | Sa | 10-12 | 300-350 | RB | 3x; Selected Standard; clear stem 175-200cm; 4 breaks |

| Hedge | Height cm | Density per m | Specification |
|---|-----------|---------------|--------------------|
| Griselinia littoralis 'Green Hedgemaster' | 120-150cm | 2 | Pot grown, 20L pot |
| Elaeagnus x ebbingei | 120-150cm | 2 | Pot grown, 20L pot |

| Planting Mixture (100%) | | Ratio | | | |
|------------------------------------|----|-----------|----------------|----------------|-----------------|
| Shrubs | % | Height cm | Pot size | Density per m2 | Specification |
| Choisya ternata | 10 | 40-60 | 3L | 3 | Bushy; 4 breaks |
| Lavandula x angustifolia 'Hidcote' | 6 | 15-20 | 2L | 4 | Bushy; 5 breaks |
| Hebe 'Green Globe' | 8 | 20-30 | 3L | 4 | Bushy; 5 breaks |
| Lonicera nitida 'May Green' | 10 | 30-40 | 2L | 3 | Bushy; 3 breaks |
| Sarcococca confusa | 8 | 3L | 3L | 4 | Bushy 7 breaks |
| Skimmia x confusa 'Kew Green' | 7 | 3L | 3L | 4 | Bushy 3 breaks |
| Herbaceous | | Pot size | Density per m2 | | |
| Geranium macrorrhizum 'Spessart' | 24 | 0.5L | 7 | | |
| Grasses | | Pot size | Density per m2 | | |
| Stipa calamagrostis 'Lemperg' | 12 | 2L | 3 | | |
| Stipa tenuissima | 12 | 2L | 5 | | |



Lonicera nitida 'May Green'



Lavandula x angustifolia 'Hidcote'



Hebe 'Emerald Green'



Skimmia x confusa 'Kew Green'



Choisya ternata



Sarcococca confusa



Malus domestica



Tilia cordata 'Green Spire'



Carpinus betulus



Acer campestre 'Streetwise'



Prunus padus 'Albertii'



Salix alba



Pyrus communis 'Conference'



Prunus avium 'Plena'



Geranium macrorrhizum 'Spessart'



Stipa tenuissima



Stipa calamagrostis 'Lemperg'



Prunus domestica 'Reine-Claude D'Oullins'

NATIVE SHRUB & WOODLAND PLANTING



- Aims**
 - Extension and improvement of the existing woodland frame.
 - Increased biodiversity through habitat improvement and creation.
 - Provide a natural screen to the school.
 - To connect existing habitats on site as well as to provide improvement to the wider ecological network beyond.
- Requirements**
 - Native plants with benefits for local wildlife.
 - Low maintenance planting.
 - Plants which can be used for fruit harvesting and ecological education.
 - Plants providing interesting aspects throughout the seasons.

Shrub Planting

| Trees | Key |
|-----------------------------|-----|
| Acer campestre 'Streetwise' | A'c |
| Carpinus betulus | Cb |
| Prunus avium 'Plena' | P'a |
| Prunus padus 'Albertii' | P'p |
| Quercus robur | Q'r |



NATIVE SHRUB & WOODLAND PLANTING

| Trees | Key | Girth cm | Height cm | Root Zone | Specification |
|-----------------------------|-----|----------|-----------|-----------|--|
| Acer campestre 'Streetwise' | Ac | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks |
| Carpinus betulus | Cb | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Prunus avium 'Plena' | Pa | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Prunus padus 'Albertii' | Pp | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |
| Quercus robur | Qr | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 175-200cm; 5 breaks |



Prunus avium 'Plena'



Prunus padus 'Albertii'



Acer campestre 'Streetwise'

Planting Mixture (100%)

| Shrubs | Ratio | Height cm | Pot size | Density per m2 | Specification |
|------------------|-------|-----------|----------|----------------|--------------------|
| Corylus avellana | 10 | 80-100 | 10L | 1 | Branched; 4 breaks |
| Viburnum opulus | 10 | 40-60 | 2L | 3 | Bushy; 7 breaks |
| Sambucus nigra | 10 | 40-60 | 2L | 2 | Branched; 3 breaks |



Corylus avellana



Sambucus nigra



Quercus robur



Carpinus betulus

| Fruit bushes | Height cm | Pot size | Density per m2 | Specification |
|-----------------------------|-----------|----------|----------------|-----------------|
| Ribes nigrum | 5 | 60-80 | 3L | Bush 3/5 shoots |
| Ribes rubrum | 5 | 60-80 | 3L | Bush 3/5 shoots |
| Rubus idaeus 'Autumn Bliss' | 5 | 40-60 | 2L | Strong cane |
| Rubus fruticosus | 5 | 20-30 | 0.5L | |

| Herbaceous | | Pot size | Density per m2 |
|-----------------------|----|----------|----------------|
| Allium ursinum | 5 | 0.5L | 7 |
| Aruncus dioicus | 5 | 2L | 4 |
| Galium odoratum | 5 | 0.5L | 7 |
| Geranium macrorrhizum | 5 | 0.5L | 7 |
| Ferns | | Pot size | Density per m2 |
| Dryopteris filix-mas | 10 | 2L | 2 |
| Grasses | | Pot size | Density per m2 |
| Carex pendula | 10 | 2L | 3 |
| Luzula sylvatica | 10 | 2L | 4 |



Viburnum opulus



Ribes nigrum



Ribes rubrum



Rubus fruticosus



Rubus idaeus 'Autumn Bliss'



Aruncus dioicus



Geranium macrorrhizum



Luzula sylvatica



Carex pendula



Galium odoratum



Allium ursinum



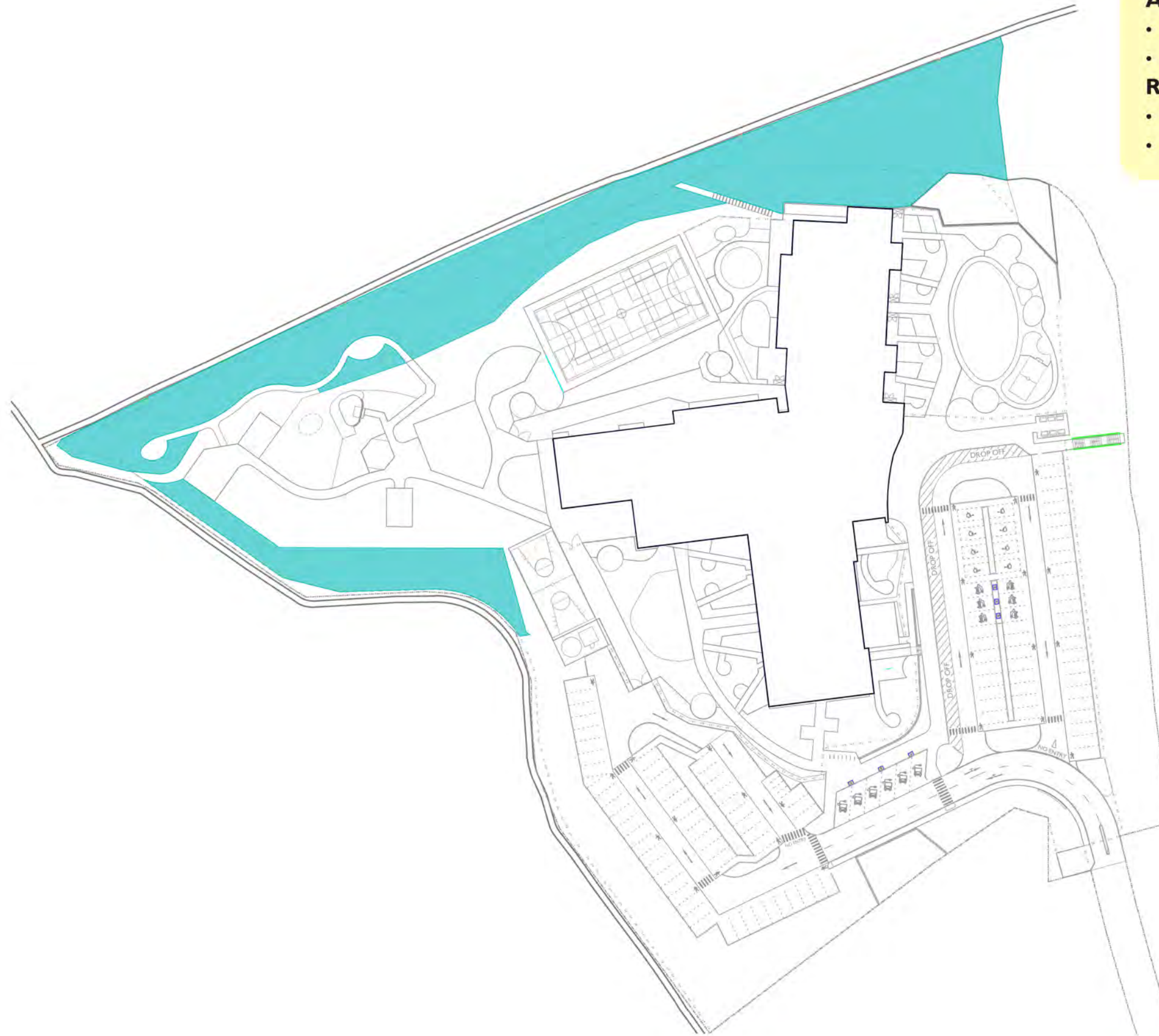
Dryopteris affinis



Dryopteris filix-mas



WOODLAND IMPROVEMENT PLANTING *to be verified by the Ecologist



Aims

- Improvement of the existing woodland understorey and fieldlayer to benefit BNG.
- Increased biodiversity through habitat improvement and creation.

Requirements

- Native plants with benefits for local wildlife and suitable for the existing conditions.
- Plants providing interesting aspects throughout the seasons.



WOODLAND IMPROVEMENT PLANTING *to be verified by the Ecologist

| Trees | Qty | Girth cm | Height cm | Root Zone | Specification |
|-------------------------------------|-----|----------|-----------|-----------|--|
| Sorbus aucuparia (1 no. per 200 m2) | 22 | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks |
| Malus sylvestris (1 no. per 200 m2) | 22 | 14-16 | 400-450 | RB | 3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks |

| Planting/ Seeding Mixture (100%) | Ratio | | | | |
|----------------------------------|-------|-----------|----------------|----------------|---|
| Shrubs | % | Height cm | Pot size | Density per m2 | Specification |
| Cornus sanguinea | 3 | 40-60 | 3L | 3 | Branched; 4 breaks |
| Corylus avellana | 3 | 80-100 | 10L | 1 | Branched; 4 breaks |
| Crataegus monogyna | 3 | 175-200 | 10-15L | 1 | 1+1; Transplant - seed raised; branched; 4 breaks |
| Ilex aquifolium | 3 | 60-80 | 3L | 1 | Leader with laterals |
| Rhamnus cathartica | 3 | 40-60 | 2L | 2 | Leader with laterals; 3 breaks |
| Sambucus nigra | 3 | 40-60 | 2L | 2 | Branched; 3 breaks |
| Viburnum opulus | 3 | 60-80 | 10L | 1 | Branched; 5 breaks |
| Climbers | | Height cm | Pot size | Density per m2 | Specification |
| Lonicera periclymenum | 3 | 60-80 | 2L | 1 | Caned; several shoots; 2 breaks |
| Fruit bushes | | Height cm | Pot size | Density per m2 | Specification |
| Ribes rubrum | 3 | 60-80 | 3L | 3 | Bush 3/5 shoots |
| Rubus fruticosus | 3 | 20-30 | 0.5L | 3 | |
| Grasses | | Pot size | Density per m2 | | |
| Carex pendula | 4 | 2L | 3 | | |
| Luzula sylvatica | 4 | 2L | 4 | | |
| Ferns | | Pot size | Density per m2 | | |
| Asplenium scolopendrium | 4 | 2L | 4 | | |
| Blechnum spicant | 4 | 2L | 4 | | |
| Dryopteris affinis | 4 | 2L | 2 | | |
| Woodland groundcover seed mix | | | | | |
| Emorsgate EW1 Woodland Mixture | 50 | 4g / m2 | | | |



Sorbus aucuparia



Malus sylvestris



Corylus avellana



Ilex aquifolium



Crataegus monogyna



Sambucus nigra



Viburnum opulus



Cornus sanguinea



Ribes rubrum



Rubus fruticosus



Lonicera periclymenum



Woodland groundlayer seed mix



Rhamnus cathartica



Carex pendula



Luzula sylvatica



Asplenium scolopendrium



Dryopteris affinis



Blechnum spicant



Pteridium aquilinum









Aims

- Providing a new wetland habitat with natural pond and wildflower meadow for ecological education opportunities and biodiversity improvement.
- Plants providing food for farm animals (e.g. pollarded willows to provide food for goats).
- Species rich pasture to provide grazing for farm animals
- Improvement of Woodland fringe habitat with native hedgerow undergrowth seeding to new woodland planting.
- To connect existing habitats on site as well as to provide improvement to the wider ecological network beyond.

Requirements

- Avoid toxic plants in areas frequented and used by students.
- Native plants with benefits for local wildlife and provide opportunities for nature studies.

| | | |
|---|---|----------|
|  | Species-Rich Grazing Meadow Mix | |
| | Habitat Aid Grazing Meadow Seed Mix | 4g / m2 |
|  | Pond Edge Mix | |
| | Germinal WFG9 Wetland and Pond mix | 5g / m2 |
|  | Wildflower Meadow Mix | |
| | Emorsgate EM3 Special General Purpose Meadow Mixture | 4g / m2 |
|  | Hedgerow Mix | |
| | Emorsgate EM1 Hedgerow Mix | 4g / m2 |
|  | Grass Seeding Mix | |
| | Germinal WFG20 Eco Species-rich Lawn | 10g / m2 |
|  | Hard-wearing fibre-reinforced Amenity Grass | |
| | ABG Advanced Turf Rootzone Reinforcement Systemwith Lindum LT8 Festival Plus Turf | |

SEEDING AND TURFING



Grazing Meadow Seed Mix
(www.habitataid.co.uk/products/grazing-meadow-mix)
Forage herbs (total 10%):
1% Yarrow
1% Ribgrass
4% Chicory
1.5% Sheep's Burnet
1.5% Sheep's Parsley
1% Sainfoin
Grasses etc. (90%):
10% Meadow Fescue
7% Smooth Stalked Meadow Grass
10% Crested Dogstail
5% Smaller Cat's Tail
20% Creeping Red Fescue
29% Perennial Ryegrass
7% Cocksfoot
2% Red Clover



WFG9 Wetland and Pond Area Mix
(www.geminalamenity.com/wfg9-wetland-and-pond-areas)
6.0% Salad Burnet (*Sanguisorba minor*)
0.3% Common Fleabane (*Pulicaria dysenterica*)
0.5% Meadow Sweet (*Filipendula ulmaria*)
1.5% Loosetrife (*Lythrum salicaria*)
0.3% Yellow Flag (*Iris Pseudacorus*)
0.5% Greater Burnet (*Sanguisorba officinalis*)
0.1% Water Aven (*Geum rivale*)
3.0% Soft-Rush (*Juncus effusus*)
0.5% Pendulous Sedge (*Carex pendula*)
2.7% Birdsfoot Trefoil (*Lotus corniculatus*)
1.1% Borage (*Borago officinalis*)
2.0% Meadow Buttercup (*Ranunculus acris*)
2.0% White Clover (*Trifolium repens*)
25.0% Slender Creeping Red Fescue (*Festuca rubra litoralis*)
22.5% Crested Dogstail (*Cynosurus cristatus*)
10.0% Smooth Stalked Meadow Grass (*Poa pratensis*)
10.0% Tall Fescue (*Festuca arundinacea*)
7.5% Chewings Fescue (*Festuca rubra commutata*)
5.0% Tufted Hair Grass(*Deschampsia cespitosa*)



EM3 Special General Purpose Meadow Mix
(www.wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/special-general-purpose-meadow-mixture/)
Wild Flowers 20%
0.40% Agrimonia eupatoria – Agrimony
0.40% Anthyllis vulneraria – Kidney Vetch
1.60% Centaurea nigra– Common Knapweed
0.60% Centaurea scabiosa – Greater Knapweed
0.10% Chaerophyllum temulum – Rough Chervil
0.40% Cruciata laevipes – Crosswort
1.00% Daucus carota – Wild Carrot
0.20% Echium vulgare –Viper's-bugloss
1.00% Galium album – Hedge Bedstraw
0.80% Galium verum – Lady's Bedstraw
0.10% Geranium pratense – Meadow Crane's-bill
0.80% Knautia arvensis – Field Scabious
0.20% Lathyrus pratensis – Meadow Vetchling
1.00% Leucanthemum vulgare – Oxeye Daisy
2.40% Malva moschata – Musk Mallow
0.60% Medicago lupulina – Black Medick
0.20% Onobrychis viciifolia – Sainfoin
0.40% Origanum vulgare –Wild Marjoram
2.20% Plantago lanceolata – Ribwort Plantain
0.40% Plantago media – Hoary Plantain
2.00% Poterium sanguisorba – Salad Burnet
0.40% Primula veris – Cowslip
0.20% Prunella vulgaris – Selfheal
0.40% Ranunculus bulbosus – Bulbous Buttercup
0.10% Sanguisorba officinalis – Great Burnet
1.00% Silene dioica – Red Campion
0.20% Silene vulgaris – Bladder Campion
0.30% Vicia cracca – Tufted Vetch
0.20% Vicia sativa ssp. segetalis – Common Vetch
80% Grasses
8.00% Agrostis capillaris – Common Bent
28.00% Cynosurus cristatus – Crested Dogstail
24.00% Festuca rubra – Red Fescue
4.00% Phleum bertolonii – Smaller Cat's-tail
16.00% Poa pratensis – Smooth-stalked Meadowgrass



EH1 Hedgerow Mix
(www.wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/hedgerow-mixture/)
Wild Flowers 20%
0.50% Agrimonia eupatoria – Agrimony
1.00% Alliaria petiolata – Garlic Mustard
0.50% Anthriscus sylvestris – Cow Parsley
1.00% Arctium minus – Lesser Burdock
2.00% Centaurea nigra – Common Knapweed
0.40% Chaerophyllum temulum – Rough Chervil
0.80% Cruciata laevipes – Crosswort
0.80% Daucus carota – Wild Carrot
1.50% Dipsacus fullonum – Wild Teasel
0.40% Filipendula ulmaria – Meadowsweet
1.50% Galium album – Hedge Bedstraw
0.40% Geum urbanum – Wood Aven
0.30% Geranium pratense – Meadow Crane's-bill
1.00% Lathyrus sylvestris – Narrow-leaved Everlasting-pea
1.20% Leucanthemum vulgare – Moon Daisy
1.00% Malva moschata – Musk Mallow
0.30% Origanum vulgare –Wild Marjoram
0.80% Plantago lanceolata – Ribwort Plantain
0.60% Primula veris – Cowslip
0.40% Rumex acetosa – Common Sorrel
2.00% Silene dioica – Red Campion
0.80% Silene vulgaris – Bladder Campion
0.80% Vicia cracca – Tufted Vetch
80% Grasses
4.80% Agrostis capillaris – Common Bent (w)
1.60% Anthoxanthum odoratum – Sweet Vernal-grass (w)
4.80% Brachypodium sylvaticum – False Brome (w)
36.00% Cynosurus cristatus – Crested Dogstail
1.60% Dactylis glomerata – Cocksfoot (w)
4.00% Deschampsia cespitosa – Tufted Hair-grass (w)
19.20% Festuca rubra – Red Fescue
8.00% Poa nemoralis – Wood Meadow-grass

colour

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