



North Littlehampton: Phase 5 and CWA

Landscape Management and Maintenance Plan

11 August 2026

Prepared on behalf of Persimmon Homes Thames Valley

North Littlehampton: Phase 5 and CWA

Landscape and Management Plan

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NOTE: additional drawings included at Appendix 4; References to the Site Wide Management Plan has been provided throughout the document (provided in blue coloured text).			



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1.0 Introduction

1.1 Background

Tir Collective is instructed by Persimmon Homes Thames Valley to prepare this Landscape Management Plan for the **Phase 5** development of North Littlehampton (Land north of Toddington Lane), and to provide documentation for Condition 45 of Planning Permission LU/47/11. Condition 45 states that:

"A verification report demonstrating completion of the works set out in the following conditions shall be submitted to and approved, in writing, by the Local Planning Authority... 16 (Landscaping). The report shall include results of monitoring carried out in accordance with the approved verification plans to demonstrate that the work have been carried out in accordance with approved details. It shall also include any plan (a long-term monitoring and maintenance plan) for longer-term monitoring and maintenance as identified in the verification plan, and for the reporting of this to the Local Planning Authority. The long-term monitoring and maintenance plan shall be implemented as approved."

Reason: To ensure a satisfactory standard of development in accordance with approved details."

- 1.1.1 Since the first draft issue of this report, it has now been updated to also include the landscape proposal within the **Central Wetland Area (CWA)** and **tree planting along the highway**.
- 1.1.2 The aim of the Landscape Management Plan is to provide details and prescriptions for the creation and management of the landscape proposal for both the short and long-term durations.

1.2 The Site (Phase 5 and CWA)

- 1.2.1 The **Phase 5** application site is defined by the red line boundary provided on Persimmon Homes's drawing 546_PL_001 Location Plan. The **CWA** application site is defined by Persimmon Homes's drawing 519_CWA-LP_01 Location Plan.
 - 1.2.2 This Landscape Management Plan is based on the landscape drawings provided by **Tir Collective** included within the Appendices. [Refer also to the Site Management Plan by Persimmon Homes, number 546_SMP_01 \(provided in Appendix 5\).](#)
 - 1.2.3 The site is located within the eastern half of the North Littlehampton development. Phase five extends to an area of approximately 10.3ha and is triangular in shape. The proposed Central Wetland abuts the development on its western edge, the water meadow is along the north/north-east, and future Phase 6 is along the east/ south-east.
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1.3 Development Proposals

Phase 5

- 1.3.1 The **Phase 5** development will comprise 261 new homes, SuDS, planting, three Local Area for Play (LAP) and a Local Equipped Area for Play (LEAP). The landscape and design objectives are to integrate the proposed development into the surrounding landscape, and provide defining characteristics throughout the development.
- 1.3.2 Landscape character areas are proposed to help provide distinctiveness within and around the site, whilst respecting the landscape setting: The Avenue, SuDS, Central Wetland Edge, Water Meadows Edge, Streets, Shared Surface Areas, LEAP, and a Local Area of Play (LAP).
- 1.3.3 For the purpose of discharging Condition 45, this Landscape Management Plan will address the short and long-term management and monitoring objectives for these landscape types:
- Trees
 - Shrubs, herbaceous plants, hedges, climbing plants and ornamental grasses
 - Amenity grass
 - Species-rich grass
 - Play features
 - SuDS
- 1.3.4 Refer to **Appendix 4** for landscape drawings:
- LA.PH5_1: Landscape Strategy
 - LA.PH5_8.1: LEAP
 - LA.PH5_8.2: LAP
 - LA.PH5_101-108: Planting plans
 - LA.PH5_109: Materials, Tree Pit and Plant Schedule
 - LA10: Specifications including SuDS

CWA

- 1.3.5 The **CWA** comprises a wetland area at the north for interest and to increase the potential for species diversity. The pond will include aquatic plants, rushes and reeds with tree and shrub planting at the edge of the development plateaus to allow for open uninterrupted views towards the north, to the hills within the National Park.

1.3.6 To the south a 'parkland area is being created with retained trees, bolstered with new native tree and shrub planting, and hazel coppice which will create an area for informal recreation. Long grass / species rich grass and wildflowers to be established.

1.3.7 Refer to **Appendix 4** for landscape drawings:

- LA01: Landscape Strategy
- LA02: Planting and features
- LA05: Planting Plan
- LA06: Specifications
- LA10: Specifications including SuDS

2.0 Design Concepts

2.1 Key design concepts (Phase 5 and CWA)

2.1.1 The following list defines the key landscape design concepts which have guided the preparation of the landscape proposals:

- Proposed **tree planting** throughout the development for amenity and biodiversity value.
- Introduction of **species-rich grass** to be kept long within road verges and SuDS.
- **Shrubs, herbaceous plants, hedges, climbing plants, and ornamental grasses** throughout for amenity and biodiversity enhancements. The planting pallets will vary throughout the range of character areas identified above.
- **Amenity grass** within front gardens and play areas of Phase 5, and at narrow swales within the CWA.
- **Play features** within the LAPs and LEAP, and informal play features within the CWA.
- **Mixed shrub and herbaceous species** within the wide SuDS of Phase 5.

2.1.2 The management and maintenance objectives have been formulated to achieve and fulfil the overall design concepts.

2.2 Design objectives

2.2.1 Design objectives aim to establish planting to:

- Provide a range of plants and grasses across the site for amenity value and to increase biodiversity in addition to providing colour, interest and texture around the development.
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2.3 Management objectives

- 2.3.1 Management objectives will involve **short term** and **long-term commitments** to achieve and fulfil the overall design concepts. Refer also to the **Site Management Plan** by Persimmon Homes, number 546_SMP_01 (provided in **Appendix 5**).

Short term objectives (0-5 years):

- Successfully establish plants with acceptable rates of growth.
- Remove weeds from the planting areas.
- Replace dead plants within the structure planting where necessary.
- Provide sufficient resources including necessary labour, materials, and machinery.
- Remove vegetation / leaf litter from SuDS.

Long term objectives (5-40 years):

- To carry out periodic maintenance as necessary.
- 2.3.2 With all aspects of management, it is essential that the principle of an 'on-going commitment' is established and that sufficient recourses are made available to ensure continuity.

2.4 Maintenance objectives

- 2.4.1 Maintenance objectives will include regular planting checks and maintenance to ensure that the planting is establishing and is consistent with the original design intentions. This will involve continuous / ongoing routine operations throughout the year, for which a detailed maintenance schedule is to be followed.

2.5 Monitoring

- 2.5.1 Monitoring is an essential element of the plan to ensure that the results of any management work are measured and evaluated. Monitoring reports will be provided to the Local Planning Authority (LPA). Any lessons learnt from this monitoring can then be reflected in a review of the management plan (to be agreed with the LPA), which should normally be made every five years.

2.6 Maintenance Responsibility

- 2.6.1 There are several 3m wide shared paths through the CWA, branching from the Main Avenue, Phase 5 and Phase 4. The embankments of the paths and swales are no steeper than 1in3. The entire CWA is a functional floodplain therefore the finished levels are relatively flat. The whole area can be easily accessed by operatives and machinery for both maintenance and potential remediation purposes.

- 2.6.2 The entire CWA, including paths, planting/seeding, swales and ponds, will remain in single ownership and will be maintained by a single Management Company, therefore specific easements for any of the features within the CWA will not be required. A separate drawing showing maintenance responsibility for the CWA has not needed to have been provided.
- 2.6.3 For Phase 5, a maintenance responsibility plan *has* been prepared due to the site being managed by several companies (WSCC, ICOSA and the Management Company).
- 2.6.4 Refer also to the **Site Management Plan** by Persimmon Homes, number 546_SMP_01 (provided in **Appendix 5**).

2.7 Accidental Spillages of Pollutants

- 2.7.1 There is no action plan for dealing with accidental spillages because it is not considered necessary in this instance for the CWA. The CWA will be used by pedestrians and cyclists and is comprised of open landscaping and shared paths. The only vehicles or equipment that could potentially cause a spillage event will be operated by the Management Company as/when they are undertaking maintenance. As a professional organisation, it is expected that their equipment is suitably maintained, and the Operatives are also suitably trained in the use of the equipment. In the very unlikely event of a spillage from their equipment the Operatives will deal with it immediately.

2.8 Health and Safety

- 2.8.1 The CWA will act as a functional floodplain for the Black Ditch so is anticipated to flood regularly. To facilitate this there is no restriction on the movement of water into and out of the CWA and, as such, there are not conduits or pipes that could become blocked and need emergency clearance.
- 2.8.2 Boardwalk bridges will be positioned along the shared-use paths at the crossing points with the swales, ensuring continuity of water movement because the bridges are wide enough to allow floodwater from the Black Ditch to flow unimpeded into and out of the CWA. The flow of water into and out of the large and flat CWA area will be very slow moving.
- 2.8.3 With the above in mind there will be no need to undertake maintenance activities during periods of severe rainfall. Scheduled maintenance will not be undertaken if the CWA is flooded, and it will be deferred until flood water subsides and it will be safe to do so.

2.9 Alterations or works to be undertaken

- 2.9.1 It is unlikely there will be alterations to the CWA because it forms a large public open space area positioned centrally within the entire Hampton Park development. If there are alterations it will be covered in the planning application for said alterations, which would be accompanied by a drainage statement that describes the potential impact on the drainage. Any alterations would ensure the drainage systems continue to operate adequately.
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2.10 Contact information

- 2.10.1 If the surface water drainage system fails to function correctly, please contact **HML, 42 New Broadway, Worthing, West Sussex, BN11 4HS**.

3.0 Proposals

Tree planting

- 3.1.1 Tree planting is proposed along the main spine road, throughout streets/ courtyards, at play areas and general landscape areas within the **Phase 5** development. Trees planted in groups are provided in the southern part of the **CWA** with lines of trees at the top of the embankments. The proposed tree planting throughout will include a combination of native and ornamental species, including flowering and fruiting varieties.
- 3.1.2 **Tree planting within and adjacent to the highway are shown on the landscape planting plans.** Maintenance specifications will be as per this document. Tree guards are not required due to the trees being implemented within soft verges. Refer also to the landscape plans for typical cross-sections for tree planting.

Shrubs, herbaceous plants, hedges and climbing plants

- 3.1.3 For **Phase 5**, planting will be provided around and within the entire site such as along streets, front gardens, within verges, at play areas and courtyards. The planting will help soften road edges and provide a pleasant living environment for the future residents in addition to enhancing biodiversity. The wide swales (SuDS) will also include areas of mixed herbaceous and shrub planting along the upper slopes of the features.
- 3.1.4 At the **CWA**, planting will include native species shrub planting blocks predominantly within the southern part of the space, with species-rich grass/long grass, marginal aquatics and reed beds elsewhere.

Amenity grass

- 3.1.5 For **Phase 5**, amenity grass will be provided within some front gardens and at the play areas. It is intended that the amenity grass will be mown to a short sword, although it will only be provided within minimal locations due to most of the soft landscape areas being covered by planting.
- 3.1.6 For the **CWA**, amenity grass will be provided within the narrow swale depressions and at informal recreation areas.

Species-rich Grass (Flowering Lawn Mixture)

- 3.1.7 For **Phase 5**, species-rich grass for dry areas will be sown within some of the verges along the main spine road and within some larger areas on the western edge of the development fronting the Central Wetland. A suitable seed mixture such as **Emorsgate EL1 (Flowering Lawn)** shall be seeded, which will tolerate being cut if needed to be cut more regularly than intended.

Species-rich Grass (Meadow Mixture for Wetlands)

- 3.1.8 Species-rich grass within SuDS at **Phase 5** and within the **CWA** will be seeded with a suitable for seed mixture for dry and damp conditions such as **Emorsgate EM8 (Meadow Mixture for Wetlands)**. Long grass and natural regeneration will also be encouraged within the CWA.

Play features

- 3.1.9 Four Local Areas for Play (LAP) are proposed within the **Phase 5** development, including one Local Equipped Area for Play (LEAP).
- 3.1.10 The LAPs include a combination of play boulders and mounds with some timber play structures for more formal play opportunities. The LEAP includes several pieces of formal play equipment amongst areas of rubber play bark mulch.
- 3.1.11 Within the **CWA**, there are some informal play boulders, a climbing feature and balance logs.

SuDS

- 3.1.12 The SuDS within **Phase 5** provide the backbone of both the green/ blue infrastructure within the development and provide connectivity across the site between the Central Wetland and the Water Meadows at the north. They provide sustainable drainage features within the development. Within the SuDS, species rich grass will be established including some areas of shrub/herbaceous plants.
- 3.1.13 Construction details and soiling is provided by the drainage engineer. They will be seeded largely with **Emorsgate EM8 Meadow Mixture for Wetlands**. The details for establishment and management are provided above. Some areas of shrub and herbaceous plants will also be implemented along the side slopes of the SuDS (swales).
- 3.1.14 The **CWA** has been designed by Mayer Brown to act as a basin for storing water if the Black Ditch watercourse to the north becomes flooded. The housing parcels either side of the CWA are on elevated land. The wide swales within Phase 5 will store rainwater runoff from hard surfaces and will be directed towards the CWA where it will be conveyed through the smaller swales and out the site in the south.
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- 3.1.15 The swales within the **CWA** are approximately 3 metres wide and 400mm deep with 1:3 side slopes. They are relatively shallow depressions and are intended to be dry features throughout most of the year. The larger depressions within the CWA are approximately 1.0m deep, with 1:3 side slopes. It is anticipated that the depressions will be damp throughout most of the year which will support vegetation tolerant of minor inundations and damp conditions which will also help to enhance biodiversity and visual interest through increasing species diversity.
- 3.1.16 The wide swales within **Phase 5** are approximately 13.5m wide and 2 metres deep with 1:3 side slopes. The base of the swales are approximately 1.5m wide and are generally flat. The swales are intended to be relatively dry features throughout the year.
- 3.1.17 The swales within the **CWA** and **Phase 5** will help to filtrate out pollutant and manage the flow of surface water run-off before it exits the site.
- 3.1.18 Vegetation within the **CWA** basin will include:
- Native tree and shrubs (whips planted from 'day 1')
 - Tree planting (Standard/ Selected Standard/ Heavy Standard/ Extra Heavy Standard/ Semi-mature sizes/ Multi-stem to be implemented from day 1)
 - Amenity grass (kept short)
 - Species-rich grass (Kept long)
 - Areas of natural regeneration
 - Hazel coppice
 - Reed beds
 - Marginal aquatics.
- 3.1.19 For areas identified as 'Proposed species-rich grass: to be kept short and cut regularly throughout the year' (for locations, refer to Planting Plan Drawing LA.5): Amenity grass within the narrow swales through the **CWA** will be kept short to 40mm high (cut regularly throughout the year) to ensure that the SuDS function correctly and convey water.
- 3.1.20 For areas identified as 'Proposed species-rich grass/ natural regeneration: to be kept long and cut once a year' (for locations, refer to Planting Plan Drawing LA.5): Species-rich grass elsewhere within the **CWA** will be left to grow long to encourage grasses to flower for interest and to enhance biodiversity. It is intended that the long grass areas will only be cut once a year following establishment. Refer to the notes relating to Species-Rich grass - "Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower."
- 3.1.21 Vegetation within the **Phase 5** wide swales will also include Species-rich grass, left to grow long.

4.0 Management Objectives and Prescriptions

4.1.1 The following provides management objectives and prescriptions for implementing the landscape scheme, including ongoing management of the site.

4.1.2 Refer also to the [Site Management Plan](#) by Persimmon Homes, number 546_SMP_01 (provided in [Appendix 5](#)).

Tree planting

Creation Prescriptions

4.1.3 Excavate a few centimetres shallower than root-ball and twice its width with sloping, scarified sides. Root-balls of trees shall be set on a 150mm depth of horticultural grade sharp sand. Semi-Mature trees shall be set on a 400-450mm depth of horticultural grade sharp sand. Shrubs: excavate 300 x 300 x 300mm depth.

4.1.4 **Backfilling:** Backfill tree pits with 100/300mm depth subsoil and 400mm topsoil including Melcourt Topgrow peat free planting compost or similar approved at a rate of 0.125m³/pit.

4.1.5 **Plant specifications:** Plant specification to be in accordance with the HTA National Plant Specification: 03/02. Tree planting to be in accordance with BS 8545:2014 - Trees from nursery to independence in the landscape recommendations.

4.1.6 **Fertiliser:** Supply and plant, incorporating slow-release fertiliser N:P:K - 4:19:10 ENMAG or similar approved at the following rates:

- Feathered Trees: 100g / tree pit
- Standard/Selected Standard Trees: 100g / tree pit.
- Heavy/Extra Heavy Standard Trees: 130g / tree pit

4.1.7 **Tree stakes:** Provide and fix tree stakes and ties to the following dimensions:

- Feathered Trees: overall length 1250mm; height above ground: 600mm
- Standard/Selected Standard Trees: overall length 1500; height above ground: 750mm.
- Heavy/Extra Heavy Standard Trees: overall length 1500; height above ground: 750mm

Management Prescriptions

4.1.8 Maintenance commitments will be minimal after the initial establishment period although the following will need to be undertaken:

- selective pruning to improve health, free form and longevity;
 - selective thinning in the long term to allow space for the trees to develop; and
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- pest and disease control.

4.1.9 **Long-term objectives** will involve annual monitoring, and any tree work shall be undertaken in accordance with BS 3998:2010 Recommendations for Tree Work, including:

- Removal of any dead, diseased or damaged wood;
- Crown reduction to maintain clearance from buildings;
- Crown raising to maintain sufficient clearance for vehicular and pedestrian routes; and
- Removal of any crossing branches.

4.1.10 An ARB Approved tree surgeon (contractor), approved by the Arboricultural Association, shall be responsible for undertaking management and maintenance operations of trees and hedges planted within the core of the development.

Ornamental planting areas

4.1.11 Ornamental plants are proposed around the **Phase 5** site, at key locations and within SuDS. Refer to the landscape strategy plan for precise locations.

Creation Prescriptions

4.1.12 **Excavation:** Any excavations to win soil for re-use as part of landscaping must be undertaken in accordance with BS 3882:2015, BS 8601:2013 and the 2009 DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

4.1.13 **Plant specifications:** Plant specification to be in accordance with the HTA National Plant Specification: 03/02.

4.1.14 **Backfill** shrub pits with topsoil including Melcourt Topgrow peat free planting compost or similar approved at a rate of 1.0m³/20m³.

Management Prescriptions

4.1.15 Shrubs are relatively maintenance free, but care should be taken to ensure that they establish successfully. Shrubs are a diverse group of plants with many different requirements in terms of watering, pruning, feeding etc. and consequently, general good horticultural practice should be continually applied with regards to different species' requirements.

4.1.16 It will be necessary to undertake occasional formative pruning of certain ornamental shrubs (refer to Appendix 4); this should be done with respect to the overall form and shape of the shrub. Species selection and the location of planting should ensure that shrubs will not require severe pruning. It is not intended that the shrub planting will be cut back on a frequent basis. Ongoing operations will include:

- Watering, including during periods of drought;



- Mulching once a year as necessary;
- Plant replacements if necessary;
- Litter removal; and
- Pruning as necessary.

4.1.17 Herbaceous plants will need to be cut annually and divided as required. **Vegetation will need to be removed from the SuDS (including reedbed and marginal aquatic planting areas) as part of an ongoing maintenance programme to ensure that the SuDS function correctly.**

4.1.18 Spring flowering bulbs are proposed within short grass, planted randomly. Dead foliage will need to be cut a minimum of six weeks after the end of flowering. The foliage will need to be yellow and straw-like before cutting. Bulbs will also need to be watered until this time.

4.1.19 **Long term management** following the initial 5-year establishment period will involve periodic maintenance to ensure longevity and to ensure that the scheme remains as per its original design intent. Any dead or dying plants and branches should be removed annually and replacement planting shall be carried out as required to maintain the design principles of the landscape scheme. Replacement planting shall be **carried out in perpetuity** by the Management Company.

4.1.20 **Hazel coppice** to be managed on a rotational basis to provide diverse habitat conditions and maintain a varied age structure. Coppice 15% of stools annually during October-February on a 5-7 year cycle. Retain occasional standards and deadwood.

4.1.21 **Reedbed planting:** Ongoing management as above. Control competitive weeds by manual removal or application of herbicide. If reedbed becomes excessively dense, undertake rotational cutting of 20-30% of the reedbed every 5-7 years, leaving the remaining areas to provide structural diversity. Monitor water levels to ensure the scheme is functioning as designed.

4.1.22 **Marginal aquatics:** Ongoing management as above. Control competitive weeds by manual removal or application of herbicide. Thin or divide overly vigorous species where they begin to dominate, maintaining a diverse mix. Monitor water levels to ensure the scheme is functioning as designed.

Species-rich grass (Flowering Lawn Mixture)

Objectives

4.1.23 **Phase 5:** Species-rich grass will be sown within some of the verges along the main spine road and within some larger areas on the western edge of the development fronting the Central Wetland. The areas will be seeded with a suitable mix such as **Emorsgate EL1 Flowering**

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Lawn Mixture. The mix contains slow growing grasses with a selection of wildflowers which respond well to regular short mowing. Sow at a rate of 4g/m².

- 4.1.24 EL1 is a complete mix composed of 20% wildflowers and 80% slow growing grasses (by weight). The flower and grass components are also available to order separately as EL1F for the flower component and EG1 for the grass component. For quicker establishment of grass cover EL1 may be sown with an additional 10g/m² EG1 or lawn mixtures EG21 or EG22. Higher grass sowing rates will however reduce the time and space available for flower establishment, especially in good growing conditions.

Creation Prescriptions

- 4.1.25 The following measures will be undertaken to prepare the species-rich grass areas for the **Flowering Lawn Mixture**:
- Endeavour to select ground that is not highly fertile and does not have a problem with perennial weeds. Good preparation is essential to success so aim to control weeds and produce a good quality seed bed before sowing.
 - To prepare a seed bed first remove weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll or tread to produce a level firm surface.
 - Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out, divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good soil/seed contact.

Management Prescriptions

- 4.1.26 First Year management:
- The wildflower and grass species in this mix are perennial; they will be slow to germinate and grow and will not usually flower in their first growing season. There will often be a flush of annual weeds from the soil in the first growing season. This annual weed growth is easily controlled by repeated mowing.
 - Mow newly sown flowering area regularly (every 7 -10 days during growing season) throughout the first year of establishment. Cut to a height of 40-60mm, removing cuttings if dense. This will gradually develop a good sward structure, help maintain balance between faster growing grasses and slower developing wildflowers, and control annual weeds. Dig out any residual perennial weeds such as docks.

4.1.27 **Management once established:**

- Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Mowing may be suspended earlier in the year to allow cowslips to flower. Heavy quantities of cuttings should be collected and removed from site.

Species-rich grass (Meadow mixture for Wetlands)

Objectives

- 4.1.28 **Phase 5 and CWA:** New SuDS will be seeded with a suitable mix such as **Emorsgate EM8 Meadow Mixture for Wetlands**. EM8 contains species suitable for seasonally wet soils and is based on the vegetation of traditional floodplain and water meadows. Soils in wet meadows may flood for short periods in winter but are usually well drained in summer. Sow at a rate of 4g/m².
- 4.1.29 Wetland habitats are characteristically quite variable in composition, reflecting local drainage and management. Conditions can vary, for instance, between the highs and lows in ridge and furrow grassland. Localized differences may require a targeted approach. For example, boggy areas which remain waterlogged for much of the year may be best sown with pond edge mixture EP.

Creation Prescriptions

- 4.1.30 The following measures will be undertaken to prepare the species-rich grass areas for the Meadow Mixture for Wetlands:
- Endeavour to select ground that is not highly fertile and does not have a problem with perennial weeds. Good preparation is essential to success so aim to control weeds and produce a good quality seed bed before sowing.
 - To prepare a seed bed first remove weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll or tread to produce a level firm surface.
 - Sowings on ground prone to winter flooding are safest either in the early autumn or in spring once the land has drained. Most plants need time to grow mature enough to withstand flooding.
 - The seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out, divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed but firm in with a roll, or by treading, to give good soil/seed contact.
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Management Prescriptions

4.1.31 First Year management:

- Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out. Resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by mowing through to the end of March of the following year. Dig out any residual perennial weeds such as docks.

4.1.32 Management once established:

- For areas identified as 'Proposed species-rich grass: to be kept short and cut regularly throughout the year' (for locations, refer to Planting Plan Drawing LA.5): Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Mowing may be suspended earlier in the year to allow cowslips to flower. Heavy quantities of cuttings should be collected and removed from site.
- For areas identified as 'Proposed species-rich grass/ natural regeneration: to be kept long and cut once a year' (for locations, refer to Planting Plan Drawing LA.5): In the second and subsequent years EM8 sowings can be managed by traditional meadow management based around a main summer hay cut. Meadow grassland is not cut from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut': cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site.

LAP

4.1.33 **Phase 5:** The LAPs will include a combination of features for natural play, such as boulders and logs and landform, and some formal equipment including a play tower and a wobble bridge. Refer to the landscape drawing LA.PH5_8.2 LAP. For installation and maintenance, please refer to the manufacturer's instructions.

4.1.34 Play features within the **CWA** are informal boulders, logs and a timber climbing frame.

LEAP

4.1.35 **Phase 5:** The LEAP is positioned at the eastern edge of the site, adjacent to a swale. There will be seven formal play equipment pieces including a combination of metal and timber play features, with swinging, climbing, jumping and turning experiences. Surface finish materials



would be rubber mulch safety surfacing. Refer to the landscape drawing LA.PH5_8.1[E]_LEAP. For installation and maintenance, please refer to the manufacturer's instructions.

5.0 Monitoring

- 5.1.1 The monitoring commitment for proposed scheme is **five years post construction** of the residential development then **once every five years**.
- 5.1.2 A monitoring report will be compiled which reviews the aims and the management prescriptions against the site conditions. Monitoring reports will be provided to the LPA. The management prescriptions may therefore change.

6.0 Timing of the work once established

- 6.1.1 A Management Company will manage all landscape areas in perpetuity. Following the 5-year establishment period, the management objectives will be reviewed by the Management Company and updated as required. The requirement and frequency of management after the initial 5-year period will **every five years**.
- 6.1.2 Reporting of the management and maintenance requirements shall be **issued to the LPA every 5 years**. The long-term monitoring and maintenance plan shall be implemented as approved.
- 6.1.3 Refer also to the [Site Management Plan](#) by Persimmon Homes, number 546_SMP_01 (provided in [Appendix 5](#)).

7.0 Annual maintenance

7.1 Maintenance programme

- 7.1.1 The annual maintenance programme for the site will be carried out in line with the following programme to ensure that the maintenance works is carried out at the most beneficial time. For all seasons, the following will need to be undertaken:
- Inspections;
 - Watering – may be necessary during the establishment period or through periods of drought to ensure the planting/grass areas continue to thrive; and
 - Pest and disease control.
-

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Table 7-1 Timetable for Implementation of the soft landscape scheme

Action	January	February	March	April	May	June	July	August	September	October	November	December	Notes
Pre-construction													
Toolbox talk													To all construction staff prior to any works commencing
Construction and Operation													
Inspections including adjusting tree stakes and ties when necessary, and after strong winds. Inspect play equipment.													Inspect play equipment in accordance with manufacturers' instructions.
Watering trees, all planting and grass areas.													As necessary for the continued thriving of all plants.
Litter removal to all landscaped areas, and play areas. Remove leaf litter and unwanted leaf litter from the SuDS of Phase 5 and from swales within the CWA.													As required throughout the year.
Pest and disease control to trees, all planting and grass areas.													As required
Weed control.													
Amenity grass cutting and trim edges.													Remove all arisings.
EL1 Flowering Lawn Mixture – establishment	Mow every 7-10 days during growing season throughout the first year to 40-60mm.												In accordance with manufacturers' instructions.

[illegible]

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7.2 Annual maintenance schedules

Table 7-2 Annual Maintenance: Shrub and tree planting

Action	Details	Timing	Standard
Watering	Water to establish trees and thereafter during periods of drought. Water should be applied slowly to avoid soil erosion.	When necessary	As a general guide to provide an adequate soaking of dry soil, the following are minimum quantities required: • 1.5 - 2.0m high: 10 litres • 3.0 - 5.0m high: 20 litres • 6.0 - 8.0m high: 40 litres • 9.0 - 10.0m high: 100 litres Refer to Appendix D : Q35/ 110; 155; 160
Weed control	Hand weed a minimum of 4 times per year. Apply a herbicide to kill re-growth when required.	February; April; May; July; September	Refer to Appendix 1 : Q35/ 645; 650; 657; 670
Fertilizer	Applications of fertilizer to be carried out early in the growing season.	April	Ensure correct fertilizer application. Refer to Appendix 1 : Q35/ 695
Pest and disease control	To be carried out if necessary and in accordance with best practice.	When required	To eradicate all pests and disease to a high standard
Pruning	At the appropriate season for the species, pruning to be carried out to remove all damaged diseased or dead wood. To be commenced from year 5.	February – October Where pruning occurs in bird breeding season (Mar – Sept), works must avoid impacting nests	Shrubs : Prune to ensure the plant is kept well balanced and in good shape. Refer to Appendix 2 for pruning techniques and Appendix 3 for pruning schedule. Refer to Appendix 1 : Q35/ 170; 540; 545; 550; 575; 580
Tree stakes/ties	Tree stakes will be needed for at least three years and should be replaced if broken or decayed	-	Stakes and ties to be inspected at least once a month and after very heavy winds. Adjust ties if necessary to conform to stem growth or to prevent chafing. Refer to Appendix D : Q35/ 510
Litter removal	Collect and remove all extraneous rubbish	As required	Refer to Appendix D : Q35/ 190
Fork over planting beds (Aeration)	Prick up trodden or compacted soil surfaces to aerate the soil without damaging the plants.	March/September	Refer to Appendix D : Q35/680



Table 7-3 Annual Maintenance: Amenity Grass

Action	Details	Timing	Standard
Watering	-	When necessary	Refer to Appendix D: Q35/ 110; 155; 160
Mowing	The grass area shall be managed to a height of 25mm	March - October	Refer to Appendix D: Q35/ 170; 220; 225; 235; 240; 265
Weed control	Hand weed a minimum of 4 times per year. Apply a selective herbicide to kill re-growth when required	February; April; May; July	Refer to Appendix D: Q35/645; 650; 657
Raking/Scarifying	Relieve thatched conditions and remove dead grass in the autumn over the whole of the grassed areas.	September	Appendix D: Q35/ 300
Spiking (Aeration)	Aerate to increase water, nutrient and oxygen movement into the soil	September	Refer to Appendix D: Q35/ 295
Fertilizer	Applications of fertilizer to be carried out early in the growing season in first year (further application to be advised by monitoring)	April	Ensure correct fertilizer application. Refer to Appendix D: Q35/ 695
Pest and disease control	to be carried out if necessary and in accordance with best practice	When required	To eradicate all pests and disease to a high standard
General	If surface is disturbed by over use, restore by firming or lifting with a fork	When required	-
Litter removal	Collect and remove all extraneous rubbish	January	Refer to Appendix D: Q35/ 190

Table 7-4 Annual Maintenance: Species-rich grass

Action	Details	Timing	Standard
Watering	-	When necessary	Refer to Appendix D: Q35/ 110; 155; 160
YEAR 1 Mowing	Undertake initial cut in the August of Year 1 after seeding in either the April or October, to 50mm. Remove arisings and/or compost.	August	
YEAR 1 Mowing	Cut grass to 50mm to keep short in the first year, in the following February. Remove arisings and/or compost.	Following February	
YEAR 1 Mowing	Cut grass to 50mm to keep short in the first year, in March. Remove arisings and/or compost.	March	

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8.0 Appendices

Appendix 1: Maintenance Specification Q35

Generally

- 110 NOTICE: Give notice before:
- Application of herbicide.
 - Application of fertilizer.
 - Watering.
 - Each site maintenance visit.
 - Period of notice: 1 week before site visit.
- 130 REINSTATEMENT: Damage or disturbance to soil structure, planting, grass: Reinstate to original condition and within a reasonable period of time (according to season).
- 140 CONTROL OF MAMMALIAN PESTS: Employ only approved firms and methods.
- 155 WATERING
- Supply: Potable mains water.
 - Quantity: Ensure the full depth of topsoil is thoroughly wetted.
 - Application: Do not damage or loosen plants. Use a fine rose or low-pressure hose where appropriate to avoid damaging or loosening plants.
 - Compacted soil: Where necessary, loosen soil or form depressions around the stem base of plants to ensure that water reaches the root zone instead of dispersing on the surface.
 - Frequency: As necessary for the continued thriving of all planting/grass areas.
- 160 WATER RESTRICTIONS: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.
- 170 DISPOSAL OF ARISING GENERALLY: unless specified otherwise, dispose of arisings from all specified operations by removing from site.
- 180 CHIPPING OR SHREDDING: Not permitted on site.
- 197 CLEANLINESS: Leave the works in a clean, tidy condition at completion and after any maintenance operations.

Existing grassland Areas

- 210 MAINTENANCE OF GRASS AREAS: Maintain grass in a manner appropriate to the intended use. Carry out the following as necessary:

- Grass height: to be maintained through mowing, leaving some grassland free to flower and set seed throughout spring – summer.
- Condition: Maintain grass in a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
- Water logging and compaction: ensure that soil and grass does not become compacted or waterlogged.

New grassland areas

222 MAINTENANCE OF IMPROVED/ SPECIES RICH GRASS AREAS:

- Grass height: to be maintained through mowing leaving some grassland free to flower and set seed throughout spring – summer.
- Condition: Maintain grass in a healthy vigorous sward, free from disease, fungal growth, discolouration, scorch or wilt.
- Water logging and compaction: ensure that soil and grass does not become compacted or waterlogged.

273 MAINTENANCE OF RHYNE/HEDGEROW BUFFERS: Carry out the following:

- Times of year/frequency of cutting: October to March
- Height of cut: 80mm eight weeks after sowing in first year; subsequent years 150mm, with exception of vegetation 2m radius around refugia, which will not be cut.
- Arisings: Cuttings will be left to dry and shed seed for approximately one to seven days and the resulting cuttings removed from the site and composted.

275 MAINTENANCE OF TUSSOCKY/NECTAR RICH PLANTING: Carry out the following:

- Times of year/frequency of cutting: October to March
- Height of cut: 80mm eight weeks after sowing in first year; subsequent years 150mm, with exception of vegetation 2m radius around refugia, which will not be cut.
- Arisings: Cuttings will be left to dry and shed seed for approximately one to seven days and the resulting cuttings removed from the site and composted.

Native Shrubs / Trees

500 ESTABLISHMENT OF NEW PLANTING

- Duration: 0-5 years.
 - Weed control: refer to Q35/645; 650; 657; 670.
-

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- Area: Maintain a weed free area around each tree and shrub, minimum diameter the larger of 1 m or the surface of the original planting pit.
- 510 TREE STAKES AND TIES (IF REQUIRED): Inspect as scheduled and additionally immediately after strong winds, and carry out the following:
- Check stakes for looseness, breaks and decay and replace as necessary to original specification. If a tree with a defective stake has grown sufficiently to become self supporting, remove stake(s) and fill the hole(s) with lightly compacted soil.
 - Adjust, refix or replace loose or defective ties as necessary, allowing for growth since planting and to prevent chafing. Where chafing has occurred, reposition or replace ties to prevent further chafing.
 - Where stakes are longer than half the height of the clear stem of the tree, cut the stake to this height in spring and retie to tree firmly but not tightly with a single tie.
 - Remove redundant tapes, tags, ties, labels and other encumbrances.
 - Remove stakes and ties during spring when no longer required to support tree.
- 520 REFIRMING: Ensure that trees and shrubs remain firmly bedded after strong winds, frost heave and other disturbances. Refirm by treading around the base. 'Collars' at the base of tree stems created by tree movement to be broken up by fork, avoiding damage to roots, backfilled with topsoil as necessary, and refirmed.
- 530 TREE SHELTERS: Adjust, refix or replace any loose or defective guards to original specification and to prevent chafing. Remove tree shelters and dispose off site once trees / shrubs are fully established.
- 540 PRUNING GENERALLY:
- Prune in accordance with good horticultural practice. Prune larger branches and woody stems in accordance with good arboricultural practice.
 - Thin, trim and shape appropriately to each species, location, season, and stage of growth, leaving a well balanced natural appearance.
 - Use clean sharp secateurs, hand saws or other tools to carry out works. Trim off ragged edges of bark or wood with a sharp knife.
 - Remove branches without damaging or tearing the stem.
 - Keep wounds as small as possible and cut cleanly back to sound wood. Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
 - Prune larger branches neither flush nor leaving a stub but using the branch bark ridge or branch collar as a pruning guide.
- 545 PRUNING OF EXCESSIVE OVERHANG: Remove annually any growth encroaching onto grassed

areas.

550 PRUNING OF EXCESSIVE HEIGHT: Remove excessive height of more than five metres within the edge mix, and eight metres within woodland mix and dispose off site.

570 FORMATIVE PRUNING OF YOUNG TREES:

- Do not prune whips or feathered trees.
- Type and timing of pruning operations to be carried out to suit the plant species.
- Do not prune during the late winter/early spring sap flow period, unless specified otherwise.
- Crown prune young trees up to 4 m high by removing dead branches and reducing selected side branches by one third to preserve a well balanced head, ensuring the development of a single strong leader and the removal of duplicated branches and potentially weak or tight forks. In each case cut back to live wood.

580 PRUNING FLOWERING SPECIES: Unless otherwise specified or instructed, prune:

- Winter flowering shrubs in spring.
- Shrubs flowering between March and July immediately after the flowering period.
- Shrubs flowering between July and October back to old wood in winter.

611 TRIMMING ESTABLISHED HEDGES:

- Time of year: January/February.
- Operations:
- Form: Trim carefully and neatly to regular line and shape with vertical sides.
- Trim: Remove current growth rather than old wood.
- Tools/ Cutting: suitable mechanical cutters.

620 REMOVAL OF DEAD PLANT MATERIAL: At the end of the growing season, check all shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems.

635 REINSTATEMENT OF PLANTING AREAS:

- Remove dead and damaged plants.
- Carefully move any mulch materials to one side and dig over the soil, leaving it fit for replanting. Take care not to disturb roots of adjacent plants.
- Replace plants, using pits and plants to the original specification or to match the size of adjacent or nearby plants of the same species, whichever is the greater.
- Dress with Enmag slow-release fertilizer at 70g/sq. m.

645 WEED CONTROL GENERALLY:

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- Remove and/or prevent plant growth that is not required in the landscape to achieve the following level(s) of weed control: 90% control; no weed species in excess of 150mm high.
 - Ensure that the methods used cause the minimum of damage to adjacent plants, trees or grass.
 - All tree and shrub planting to be maintained weed free throughout planting area.
- 650 HAND WEEDING: Remove all weeds, including roots, by hand using hoes, trowels or forks, taking care to remove not more than a minimum quantity of soil, causing minimum disturbance to trees, plants, mulched surfaces and leaving the area in a neat, raked, clean condition.
- 657 HERBICIDE TO KILL REGROWTH:
- Apply a suitable foliar acting herbicide to kill regrowth.
 - Allow the recommended period before clearing arisings.
- 670 WEED CONTROL WITH SUMMER HERBICIDE:
- Apply a suitable foliar acting herbicide.
 - Re-apply as necessary to maintain required level of weed control.
 - Allow the recommended period before clearing arisings.
- 680 SOIL AERATION: Prick up trodden or otherwise compacted soil surfaces using a border fork as specified in BS 7370: Part 4, to aerate the soil of root areas. Do not damage plants and their roots.
- 690 MAINTENANCE OF MULCH:
- Top up with Melcourt Forest Biomulch to thickness of 50mm.
 - Sweep up and replace mulch spilling onto adjacent areas and, if not contaminated with weeds or rubbish, return to planted area.
 - Remove weeds growing on or in mulch by hand weeding or herbicide.
- 695 FERTILIZING ESTABLISHED TREES AND SHRUBS: Spring spread of Enmag slow-release fertilizer, at a uniform rate of 70g/m².
- 710 NATIVE TREE AND SHRUB PLANTING MAINTENANCE
- Watering: In exceptional circumstances to prevent plants dying.
 - Loose plants: Refirm surrounding soil, without compacting.
 - Vegetation: Except trees and coppice shoots to be retained, cut down to 5m in edge mix area and 8m in woodland mix area.
 - Arisings: Leave between rows.
 - Ditches and drains: Keep clear.



- 715 NATIVE TREE AND SHRUB THINNING: Thin out the northern edge of the existing woodland, every five years, by removing dead/dying trees and favouring straight, upright trees. Prune low branches along the northern edge. Allow the removal of branches to be left on woodland floor to decay and return nutrients into the soil. Avoid thinning during the bird nesting season (generally March-September).

Tree work

810 TREE WORK GENERALLY

- Identification: Before starting work agree which trees, shrubs and hedges are to be removed or pruned.
- Standards: To BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
- Removing branches: Cut as shown in Arboricultural Association Leaflet No 8 'Mature tree maintenance'. Cut vertical branches similarly, with no more slope on the cut surface than is necessary to shed rainwater.
- Appearance: Leave trees with a well-balanced natural appearance.
- Chain saw work: Operatives must hold a Certificate of Competence.
- Tree work: To be carried out by an approved member of the Arboricultural Association.

815 ADDITIONAL WORK

- Defective, diseased, unsafe or weak parts of trees additional to those scheduled for attention: Give notice if detected.

820 PREVENTION OF WOUND BLEEDING

- Standard: To BS 3998, clause 8.

825 PREVENTION OF DISEASE TRANSMISSION

- Standard: To BS 3998, clause 9 and Appendix B.

830 CLEANING OUT AND DEADWOODING

Remove:

- Rubbish, wind blown or accumulated in branch forks.
- Wires, clamps, boards and metal objects, if removable without causing further damage and not part of a support structure that is to be retained.
- Other unwanted objects, e.g., tree houses, swings.

835 CUTTING AND PRUNING GENERALLY

- Tools: Appropriate, well maintained and sharp.
-

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Final pruning cuts:

- Chainsaws: Do not use on branches of less than 50 mm diameter.
- Hand saws: Cut in one continuous operation to form a smooth cut surface.
- Anvil type secateurs: Do not use.

Removing branches: Do not damage or tear the stem.

- Wounds: Keep as small as possible, cut cleanly back to sound wood leaving a smooth surface, and angled so that water will not collect on the cut area.
- Cutting: Cut at a fork or at the main stem to avoid stumps wherever possible.

Large branches: Remove in small sections and lower to ground with ropes and slings.

- Dead branches and stubs: When removing, do not cut into live wood.
- Unsafe branches: Remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease or fungus: Give notice if detected. Do not apply fungicide or sealant unless instructed.

840 CROWN REDUCTION/ SHAPING

- General: Cut back selectively to lateral or sublateral buds or branches to retain flowing branch lines without leaving stumps.

845 CROWN LIFTING

- Clearances: Remove branch systems to give clearance.
- Removing branches: Remove whole branches back to the stem or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.

850 CROWN THINNING

- Removing branches: Remove inward growing, crossing, rubbing, dead and damaged branches.
- Thinning: Selectively remove approximately 2.0 metres of secondary and small live branch growth evenly throughout the crown.
- Branches: Cut back to lateral or sublateral buds or branches without leaving stumps.
- Appearance: Leave a uniform and well-balanced structure of branches and foliage

855 CUTTING TREE ROOTS

- Excavating: Use hand tools only.
- Protected area: Do not cut roots within an area which is the larger of:



- The branch spread of the tree.
- An area with a radius of half the tree's height, measured from the trunk.
- Outside protected area: Give notice of roots exceeding 50 mm in diameter. Do not cut without approval.

Cutting:

- Make clean smooth cuts with a hand saw.
- Wounds: Minimize. Avoid ragged edges.
- Finishing: Pare cut surfaces smooth with a sharp knife.

Backfilling:

- Protection: Cover cut roots with clean sharp sand.
- Material: Backfill with original topsoil.

860 REMOVING TREES

- Standards: To BS 3998, Appendix A and Health & Safety Executive (HSE)/ Arboricultural and Forestry Advisory Group Safety Leaflets.
- Existing services: Check for below and above ground services. Give notice if they may be affected.
- Shrubs and smaller trees: Cut down and grub up roots.

Tree stumps:

- Removal by winching: Give notice. Do not use other trees as supports or anchors.
- Work near retained trees: Where tree canopies overlap and in confined spaces generally, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.

Filling holes:

- Material: Use as-dug material and/ or imported soil as required.
- Finishing: Grade to marry in with surrounding ground level

865 BARK DAMAGE

Wounds:

- Bark: Gently remove ragged edges using a sharp knife.
 - Wood: Remove splintered wood from deep wounds.
 - Size: Keep wounds as small as possible.
-

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870 CAVITIES IN TREES

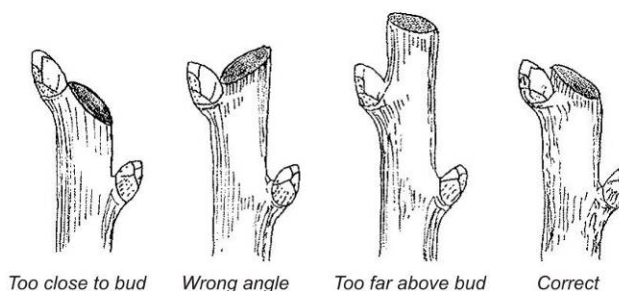
- Investigation: Remove rubbish and rotten wood. Probe the cavity to find the extent of any decay and give notice.
- Water filled cavities: Do not drain.
- Sound wood inside cavities: Do not remove.

Appendix 2: Pruning Techniques

General notes

- All pruning cuts shall be made in accordance with BS 7370
- Priming shall be undertaken to promote flowering and fruiting in accordance with the species and age of the plant.
- Stems shall only be removed so as to retain the natural appearance of the individual plant species.
- All damage, diseased or deadwood material shall be removed from trees/shrubs.
- Any crossing or rubbing branches are to be removed from trees/shrubs.
- Plants may be permitted to overlap hard areas e.g., paving. If growth restricts the use of the paving, it will be necessary to trim by shortening long growths NOT by cutting indiscriminately along the edge.
- Ground cover plants should not overhang grass areas because of the difficulty in keeping edges trimmed, prune back encroaching growth.
- Pruning cuts and techniques

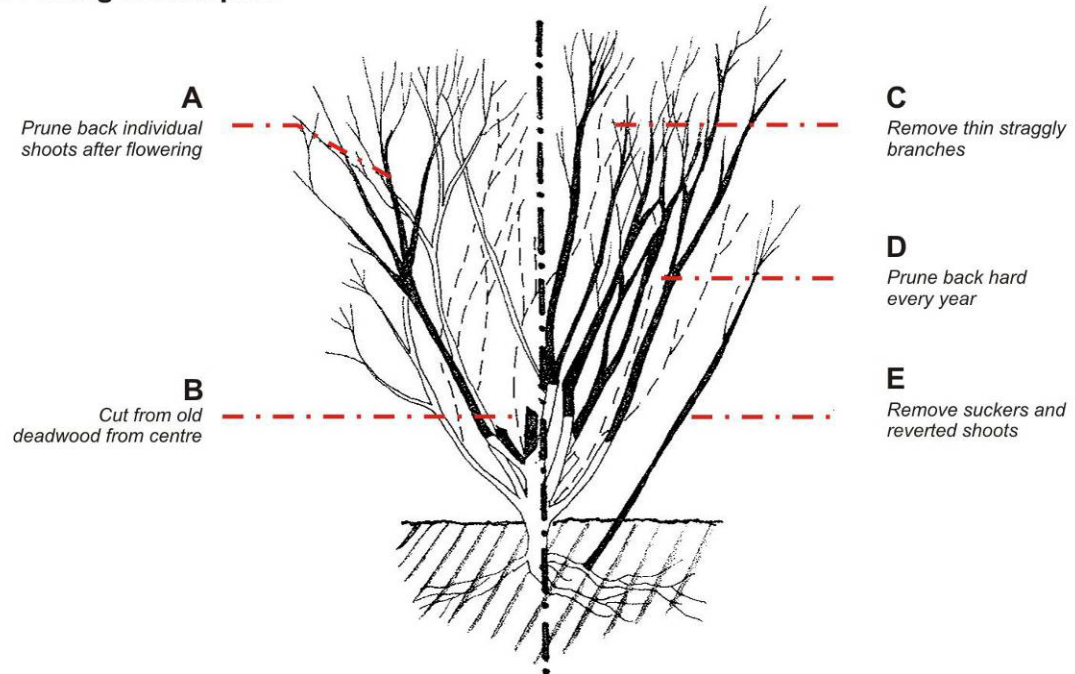
Pruning cuts



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Pruning techniques



taken from Landscape Management & Maintenance Handbook, Jones, Hing P (1990)

Appendix 3: Pruning schedule

Table 8-1 Pruning Schedule

Proposed planting	
Species	Pruning requirements
<i>Corylus avellana</i> <i>Ilex aquifolium</i> 'J.C. van Tol'	Pruning Group 1 - Light pruning When: Prune in late winter or early spring. Some deciduous trees and shrubs, such as birch (<i>Betula</i>) bleed if pruned in late winter. To facilitate rapid healing of cut surfaces, prune these in late summer or early autumn instead. Deciduous magnolias are also pruned in late summer to reduce risk of dieback. Deciduous azaleas and lilac (<i>Syringa</i>) should be pruned immediately after flowering. How: No routine pruning necessary. Remove diseased, damaged, congested or crossing shoots. Shoots that are growing in unwanted directions can also be pruned out. After pruning, mulch and feed." Ref: Shrubs and trees: light pruning / RHS Gardening
<i>Lonicera nitida</i> 'May Green'	Pruning Group 2 – Early flowering shrubs When: Early-flowering shrubs are pruned after flowering (in late winter to spring and early summer, depending on the shrub). They usually flower on the previous year's growth. Pruning immediately after flowering allows the maximum time for development of young growth to provide the following year's flowers before the end of summer. How: Pruning requirements depend on the type of shrub, but all early-flowering shrubs need routine removal of damaged, diseased or dead wood, as follows: • Cut out any damaged or dead shoots back to their point of origin or to ground level • Where there are many stems remove some to ground level to keep the bush open and avoid congestion • Finally take out any weak, spindly or twiggy shoots right to the point of origin or to ground level so the plant concentrates its resources on strong new shoots that will bear the best flowers Then continue depending on the type of shrub. Deciduous shrubs with flowers on strong young growth (Pruning group 2) Timing: Prune immediately after flowering Examples: Flowering currant (<i>Ribes</i>), <i>Forsythia</i>, mock orange (<i>Philadelphus</i>), <i>Weigela</i> Pruning: Cut back flowered growth to strong young shoots lower down. Each year cut out up to 20 percent of ageing stems to near the base" Ref: Shrubs: pruning early-flowering / RHS Gardening

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Perovskia 'Blue Spire' Caryopteris clandon. 'Heavenly Blue'	Pruning Group 6 – Summer or Autumn flowering shrubs <u>"When:</u> Shrubs that bloom after mid-summer usually produce flowers at the ends of the current season's growth, so pruning in early to mid-spring allows time for the new growth to mature and flower in the same year. Avoid pruning in winter, as it may lead to frost damage of new shoots. <u>How:</u> In early to mid-spring cut back the previous year's flowering stems to within one or two buds of the older woody framework. Also remove any thin, weak or dead growth. Fuchsia may need cutting back to near ground level. This stimulates development of strong new growth on which flowers will be produced in late summer. Pruning as early in spring as possible will give the maximum growing period for the young shoots. Evergreens require a slightly different approach. After pruning, mulch and feed. Overgrown shrubs may need renovation." Ref: Shrubs: pruning summer- or autumn-flowering / RHS Gardening
Cornus alba 'Sibirica' Cornus alba 'Spaethii' Cornus stolonifera 'Flaviramea' Corylus avellana (Pruning Groups 1 and 7 – can be coppiced alternate years to keep height restricted)	Pruning Group 7 - Pruning for colourful stems or large foliage <u>"When:</u> Late winter (February) or early spring (March), before the leaves begin to appear on the stems, is traditionally considered the best time to prune. However, to allow the maximum time to enjoy colourful stems, shrubby <i>Cornus</i> and willows are now typically pruned from late March to mid-April, just as the new growth is developing. Plant roots and shoots are in balance and, after hard pruning, plants will regrow to re-establish this balance. It is important to prune in the dormant season as the plant resources are largely in the roots and can be used for the required vigorous regrowth. If pruned in summer, plant resources - which, by this time, are predominantly found in the leaves - will be removed, and regrowth will be less strong. <u>How:</u> Young plants need to establish for a year or two before you start hard-pruning. After that you can prune as follows: • In the second or third spring, cut back to 60-90cm (2-3ft) from the ground for pollards or 5-7.5cm (2-3in) for coppiced (sometimes called stooled) specimens • Pinch or thin out sideshoots to encourage further branching • In subsequent years, cut back annually or every few years to the previous stubs • Cut white-stemmed brambles such as <i>Rubus cockburnianus</i>, to ground level • Some vigorous plants such as <i>Salix</i> require pruning annually, others, often less vigorous ones, such as <i>Cornus sanguinea</i> 'Midwinter Fire', can just be pruned every couple of years if you wish • Apply a balanced general-purpose fertiliser at 70g per square metre (2 oz per square yard) each spring to support stem and flower growth" Ref: Pruning for colourful stems or large foliage / RHS Gardening
Brachyglottis 'Sunshine' Choisya 'Aztec Pearl' Choisya ternata Cistus corbariensis (note: they do not respond well to hard	Pruning Group 8 – Early flowering evergreen shrubs <u>"When:</u> You can prune most evergreen shrubs just before growth starts in mid-spring, after any risk of frost has passed. Pruning at this time will avoid frost damage to new shoots, and any pruning scars will be concealed by new growth. Evergreens that are still flowering or about to flower in mid-spring can be left until flowering has finished. Hedges may have specific pruning times.

pruning so old, leggy plants are best replaced. Pinch back young plants after flowering to encourage a bushy habit) <i>Euonymus fortunei</i> 'Dart's Blanket' <i>Euonymus fortunei</i> 'Emerald Gaiety' <i>Hypericum</i> 'Hidcote' <i>Phlomis russeliana</i> (Pruning Group 8 or 9) <i>Pieris japonica</i> 'Mountain Fire' <i>Prunus laurocerasus</i> 'Otto Luyken' <i>Sarcococca hookeriana</i> digyna <i>Skimmia japonica</i> 'Fragrans' <i>Viburnum davidii</i>	How: When pruning any evergreen shrub (except old, overgrown shrubs, see below), aim to remove about one-third of older wood in total. • Prune out any diseased, damaged or dead shoots using long-handled loppers or a saw if necessary • And finally, thin out crowded shoots and any badly positioned ones that spoil the shrub's appearance • After pruning, plants benefit from mulching and feeding. Use either a general-purpose fertiliser or specialist rose or other high-potassium fertiliser For convenience, we have divided evergreen shrubs into three groups on the basis of timing and type of pruning required: Timing: Prune immediately after flowering. Examples: <i>Berberis</i>, box (<i>Buxus</i>), <i>Camellia</i>, <i>Ceanothus</i>, <i>Choisya</i>, <i>Daphne</i>, <i>Hypericum</i>, laurel (<i>Prunus laurocerasus</i> and <i>Prunus lusitanica</i>), <i>Mahonia</i>, <i>Pieris</i>, Azalea (<i>Rhododendron</i>), <i>Rhododendron</i>, <i>Viburnum tinus</i>. Pruning: Winter, spring and early summer-flowering evergreens such as <i>Rhododendron</i> and <i>Camellia</i> are best left unpruned except for removal of unsightly shoots and deadheading, unless some shaping is required. Do this by lightly cutting back shoots after flowering. Deadheading and removal of dead, damaged and diseased growth can be done at the same time. Exceptions: Certain evergreen shrubs require a harder prune to increase flowering or to maintain their attractive shape. Examples include groundcover such as <i>Mahonia aquifolium</i> and <i>Hypericum calycinum</i> which look best sheared over in spring. Deciduous <i>Viburnum</i> - whether winter, spring or summer flowering - also fall within pruning group 8 and can be lightly pruned after flowering unless berries are required. Those shrubs recommended for hedges, topiary or foliage often require regular trimming and tolerate heavier pruning." Ref: Shrubs: pruning evergreens / RHS Gardening
<i>Escallonia</i> 'Donard Radiance' <i>Griselinia littoralis</i> <i>Hebe</i> 'Great Orme' <i>Olearia x haastii</i> <i>Phlomis russeliana</i> (Pruning Group 8 or 9) <i>Rosmarinus officinalis</i> 'Miss Jessopp's Upright'	Pruning Group 9 – Late flowering evergreen shrubs. When: You can prune most evergreen shrubs just before growth starts in mid-spring, after any risk of frost has passed. Pruning at this time will avoid frost damage to new shoots, and any pruning scars will be concealed by new growth. Evergreens that are still flowering or about to flower in mid-spring can be left until flowering has finished. Hedges may have specific pruning times. How: When pruning any evergreen shrub (except old, overgrown shrubs, see below), aim to remove about one-third of older wood in total. • Prune out any diseased, damaged or dead shoots using long-handled loppers or a saw if necessary • And finally, thin out crowded shoots and any badly positioned ones that spoil the shrub's appearance • After pruning, plants benefit from mulching and feeding. Use either a general-purpose fertiliser or specialist rose or other high-potassium fertiliser For convenience, we have divided evergreen shrubs into three groups on the basis of timing and type of pruning required: Timing: Prune mid- to late spring. Examples: <i>Escallonia</i>, <i>Eucryphia</i>, <i>Fatsia</i>, <i>Hebe</i>, <i>Rosmarinus</i> Pruning: This group of evergreen shrubs bloom in summer and late autumn on the previous or

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	current year's growth. They need little pruning. Prune lightly removing unsightly shoots as required. Those shrubs recommended for hedges, topiary or foliage often require regular trimming and tolerate heavier pruning." Ref: https://www.rhs.org.uk/plants/types/shrubs/evergreen-pruning-guide
<i>Lavandula angustifolia</i> 'Hidcote' <i>Potentilla fruticosa</i> 'Abbotswood' (although deciduous, it falls within this pruning group) <i>Potentilla fruticosa</i> 'Tangerine' (although deciduous, it falls within this pruning group)	Pruning Group 10 – Evergreen Shrubs "When: You can prune most evergreen shrubs just before growth starts in mid-spring, after any risk of frost has passed. Pruning at this time will avoid frost damage to new shoots, and any pruning scars will be concealed by new growth. Evergreens that are still flowering or about to flower in mid-spring can be left until flowering has finished. Hedges may have specific pruning times. How: When pruning any evergreen shrub (except old, overgrown shrubs, see below), aim to remove about one-third of older wood in total. • Prune out any diseased, damaged or dead shoots using long-handled loppers or a saw if necessary • And finally, thin out crowded shoots and any badly positioned ones that spoil the shrub's appearance • After pruning, plants benefit from mulching and feeding. Use either a general-purpose fertiliser or specialist rose or other high-potassium fertiliser For convenience, we have divided evergreen shrubs into three groups on the basis of timing and type of pruning required: Timing: Prune immediately after flowering where flowering is on the previous year's growth, or in the subsequent early to mid-spring if flowering is on the current year's growth. Examples: <i>Bouvardia</i>, heather (<i>Calluna</i>), <i>Erica</i>, <i>Helianthemum</i>, <i>Hyssopus</i>, <i>Lavandula</i>, <i>Ruta</i>, <i>Santolina</i>, <i>Thymus</i>, gorse (<i>Ulex</i>). Pruning: This group of evergreen shrubs flower on the previous year's growth in spring or early summer, or on the current year's growth in late summer and autumn. Remove shoots that have flowered to within 1.5-2.5cm (¾-1in) of the previous year's growth. Exceptions: Certain deciduous shrubs such as <i>Potentilla fruticosa</i> and <i>Ceratostigma willmotianum</i> also fall within this pruning group." Ref: https://www.rhs.org.uk/plants/types/shrubs/evergreen-pruning-guide
<i>Hedera helix</i> <i>Parthenocissus quinquefolia</i> (prune in in early winter, can also be cut back in summer if need be)	Pruning Group 11 – Vigorous climbers "Timing: Those that flower on the previous year's growth should be pruned after flowering and where flowering occurs on the current year's growth prune in late winter or spring. Examples: <i>Akebia</i>, <i>Eccremocarpus</i>, honeysuckle (<i>Lonicera</i>), <i>Parthenocissus</i>, <i>Trachelospermum</i>, <i>Vitis</i>. Pruning: No regular pruning needed. However trimming may be required to keep them to the space available, removing as much from the longer shoots as necessary." Ref: Climbers and wall shrubs: pruning established plants / RHS Gardening

	Other pruning requirements
Acorus gramineus 'Ogon'	Tidy old or damaged foliage in early spring if necessary
Astilbe 'Gloria	Cut back old foliage and stems before growth begins in spring (Ref: RHS)
Calamagrostis x acutiflora 'Karl Foerster'	Cut back old stems to the ground in early spring before growth resumes.
Deschampsia cespitosa 'Goldtau'	
Carex buechananii	In summer cut out any dead leaves
Carex pendula	Remove flower stems to prevent seeding. Cut out any dead foliage as it appears
Clematis armandii Clematis armandii 'Apple Blossom'	No regular pruning is required, but if necessary, prune immediately after flowering in mid- to late spring when the danger of frost has passed. If young clematis plants are left unpruned they often produce very long single stems with the flowers produced only at the very top. Unless the plant already has three or four healthy stems growing from the base, all newly planted clematis should be pruned back hard the first spring after planting. Cut back to just above a strong pair of leaf buds about 30cm (12in) above soil level. This will encourage multiple stems which can be trained to supports to give good coverage. During the spring and summer, tie in new growth, spacing stems evenly on the support. Pruning established plants Trim overlong branches and prune back dead or winter-damaged shoots to a pair of healthy buds. Vigorous clematis, such as C. montana, can be simply sheared over after flowering to keep them tidy. Old congested plants can be thinned but it is usually easier to renovate. To renovate, cut all stems back almost to the base, just after flowering. Apply a general fertiliser, mulch and water in dry spells. Response is generally good. Leave at least three years before pruning hard again. C. armandii does not usually respond well to renovation and pruning of established plants should be limited to restricting them to the space available and removing, in spring, any leaves damaged by wind scorch.
Deschampsia cespitosa 'Goldschleier'	Remove faded flower stems in early spring and comb out damaged foliage. If necessary try renovating by cutting back close the ground in early spring before growth resumes (Ref: RHS)
Heuchera 'Chocolate Ruffles'	Remove faded flower spikes (Ref: RHS)
Hosta fortunei 'Aureomarginata'	Remove spent foliage as required and clear up dead foliage when it dies back at the end of the growing season (Ref: RHS)
Iris pseudacorus	Remove any dying foliage in autumn, old flower stems can be cut down after flowering (Ref: RHS)
Luzula nivea Pachysandra terminalis	No pruning required (Ref: RHS)
Nepeta 'Six Hills Giant'	Trim after flowering to keep plants compact and to encourage a second flowering (Ref: RHS)
Phormium 'Bronze Baby'	Dead or damaged leaves may be removed in the spring (Ref: RHS)
Phormium 'Sundowner'	
Phormium tenax	

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Schizostylis coccinea 'Major' (Hesperantha coccinea 'Major')	Deadhead to prolong flowering, cut down stems after flowering (Ref: RHS)
Verbena bonariensis	Cut down in spring as new growth emerges from the base; deadhead in autumn if seed is not required



Appendix 4: Drawings

PHASE 5 ONLY

Persimmon Homes drawing:

546_PL_001: Location Plan (Phase 5)

Tir Collective drawings:

LA.PH5_1: Landscape Strategy
LA.PH5.3 Landscape Strategy: SUDs
LA.PH5_8.1: LEAP
LA.PH5_8.2: LAP
LA.PH5_101-108: Planting plans
LA.PH5_109: Materials, Tree Pit and Plant Schedule
LA10: Specifications including SuDS

CENTRAL WETLAND ONLY

Persimmon Homes drawing:

519_CWA-LP_01: Location Plan (CWA)

Tir Collective drawings:

LA01: Landscape Strategy
LA02: Planting and features
LA05: Planting Plan
LA06: Specifications
LA10: Specifications including SuDS

Mayer Brown drawings:

SF/PHLITTLE-CWA.10/50: Bulk Earthworks - Isopachyte Heights
SF/PHLITTLE-CWA.10/51: Bulk Earthworks - Sections Through Central Wetland
MB/C/03: Proposed Central Wetland Swales Cross Sections
SF/PHLITTLE-CWA.10/20: Proposed Levels and Drainage
SF/PHLITTLE-CWA.10/30: Construction Treatments
SF/PHLITTLE-CWA.10/40: Shared Use Paths Longitudinal Sections & Chainages

Stantec drawing:

4001/008: Flood Compensation

Eastwood drawings:

47631/0101: Footbridge 1 Foundation Details
47631/0102: Footbridge 2 Foundation Details

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47631/0103: Footbridge 3 Foundation Details

OTHER - MAIN AVENUE, NORTHERN CROSSING, AND DEVELOPMENT PARCELS

Mayer Brown Drawings:

A/PHLITTLE-MAIN.1/01:	Main Avenue & Parcels East of Wetlands
A/PHLITTLE-MAIN.1/20-1:	Drainage General Arrangement Drawing (1 of 3)
A/PHLITTLE-MAIN.1/30-1:	Construction Treatments Drawing (1 of 3)
A/PHLITTLE-MAIN.1/40:	Proposed Centre Line Chainages
MB/C/02:	Northern Crossing and Bebo Construction Detail
MBSK211026-1:	Northern Crossing Drainage Interface with PH4
MBSK211026-2:	PH2 Drainage Interface with PH4 & main avenue
MBF02.DWG	Swales 01 & 02 Construction Details and Setting Out
MBF03.DWG	Swales 03 & 04 Construction Details and Setting Out

Peter Brett drawing:

35944/1507/003: North Crossing General Arrangement

WYG drawing:

A044029/SK04: Outline Proposed Surface Water Management Plan

Eastwood drawings:

47631/0010	Embankment Piled Raft / Arch Bridge Foundation - Option 1
47631/0012	Typical Sections - Sheet 2 Of 2. Arch Bridge Foundation.



Application Boundary

KEY:



Phase 5 & Spine Road Infrastructure
Application Site Boundary



A	Redline updated to show full extent of Spine Road combined with Phase 5 development	22.07.21
REV		DATE



PERSIMMON
Together, we make a home

Persimmon Homes Thames Valley
Persimmon House, Knoll Road,
Camberley, Surrey GU15 3TQ
Tel: 01276 808080

Site:	Phase 5 Littlehampton	Date:	April 2021
Scale:	1:2500@ A3P	Drawn by:	AT
Proj No:	546_PL_001	Checked by:	RC
Drawing Title:	Location Plan	Rev:	A
Drawing Status:	SUBMITTED		



The landscape and design objectives are to integrate the proposed development into the surrounding landscape, and provide defining characteristics throughout the development. Landscape character areas are proposed to help provide distinctiveness within and around the site, whilst respecting the landscape setting.



The Avenue: The primary access road. The Avenue, arcs across the site in a west-east direction, dividing it in two, creating a prominent linear feature before curving south-eastwards to form an edge to the development. Trees along the road edge would be planted, combined with grass verges and low shrub planting to create a sense of enclosure and would emphasise the role of the road and provide contrast to the less formal structure of the adjoining residential roads. The road verges allows for the selection of medium-sized trees to be positioned away from the road edge, and the planting of initial hedges would provide continuity along the length of the road.



SuDS: These would provide the backbone of both the green blue and green grey infrastructure and play a key role in managing the water on the site between the Central Wetland to the south-west and the Water Meadows at the north. They would provide sustainable drainage features within the development. Soft landscaping will determine the character of these areas, with an emphasis on species that are native to the area, and which would provide a sense of continuity and separation from the adjacent residential areas, while species rich meadows and wetland planting would deliver both a range of habitats and seasonal variation.



Central Wetland Edge: Adjoining the proposed development to the west is the proposed Central Wetland. It includes native species and aquatic plants, in addition to grasses that would be left to grow long over time and flower. The proposed planting along the eastern edge of the development would create a transitional zone from the residential area to the Central Wetland with medium-large sized specimen trees being positioned along the wetland edge, and smaller trees interspersed within shrub planting. The planting would provide a sense of enclosure and visual interest, the larger zones for soft landscape would include species rich grass, wildflowers as appropriate.



Water Meadows Edge: Adjoining the proposed development to the north is the existing water meadows relating to the Black Ditch further north. Again, the properties here overlook the water meadows. The proposed landscape would mirror the proposals fronting the Central Wetland, the transitional zone between the development edge and the water meadow edge.



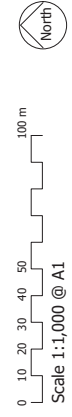
Streets: Leading off the Main Avenue are a series of roads, connecting to the residential buildings. The semi-formal connectivity role would be reflected in the landscape, with scattered small street trees and low shrub planting in the narrow foot gardens. Due to the limited planting space, a strong colour palette would be encouraged to provide planting interest.



Shared Surface Areas: These are the most informal of the residential areas on the site, with pedestrians and vehicle traffic sharing the same space. To aid in creating an environment that is both pleasant and safe for all users, trees would be used where possible with an understorey of vibrant low-level planting. The soft landscape would provide a sense of enclosure and visual interest, and the planting species would provide structure, texture and colour.



Local Equipped Area for Play (LEAP): The LEAP is positioned towards the south-eastern edge of the site with overlooking properties. The LEAP would include a combination of metal and timber play features, with swinging, climbing, jumping and turning experiences. These elements would provide a minimum number of seven play equipment items, and the surrounding landscape would be rubber mulch safety surfacing.





1: Comic Town Multi-play unit



2: 3-To-Connect



3: Net swing



4: Wildlife wheelspin



5: Rotary Worm Roundabout



6: Comic Piggy Spinner



7: Square trampoline



8: Traditional Bench

Play equipment by Jupiter Play or similar and approved



The LEAP is positioned towards the south-eastern edge of the site with overlooking properties. The LEAP would include a combination of metal and timber play features, with swinging, climbing, jumping and turning experiences. These elements would provide a minimum number of seven play experiences. Surface finish materials would be rubber mulch safety surfacing.

- Rubber Mulch by Redlynch Leisure, or similar.
Product: Tiger Mulch. Colour: Green.
- Rubber Mulch by Redlynch Leisure, or similar.
Product: Tiger Mulch. Colour: Autumn.
- Rubber Mulch by Redlynch Leisure, or similar.
Product: Tiger Mulch. Colour: Beige.

Tree planting:

Acer freemanii 'Armstrong'
Platanus x hispanica

Shrub planting

- Lavandula angustifolia 'Hidcote'
- Callunagrostis x acutiflora 'Karl Foerster'
- Perovskia 'Blue Spire'
- Deschampsia cespitosa 'Goldschleier'
- Cholera x dewittiana 'Aztec Pearl'
- Skimmia japonica 'Fragrans'
- Heuchera 'Chocolate Ruffles'



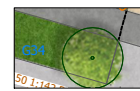
11: Prosafe Self Closing Pedestrian Gate by Online Playgrounds or similar and approved



TC20209_Landscape plans(G)dwg

North Littlehampton:
Phase 5

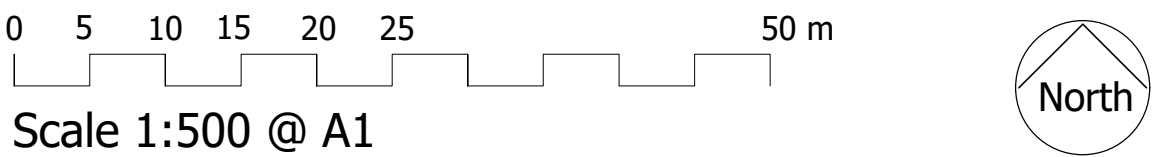
Landscape Strategy: SuDS LA.PH5.3

- 

Tree planting
Alnus glutinosa
Alnus x spaethii
Gleditsia triacanthos 'Draves Street Keeper'
Quercus robur
- 

Grasses
Meadow mixture for wetlands [Emorsgate EM8]
Carex buchananii
Deschampsia cespitosa 'Goldschleier'
- 

Shrubs/ Herbaceous planting
Corylus avellana
Perovskia atriplicifolia 'Blue Spire'



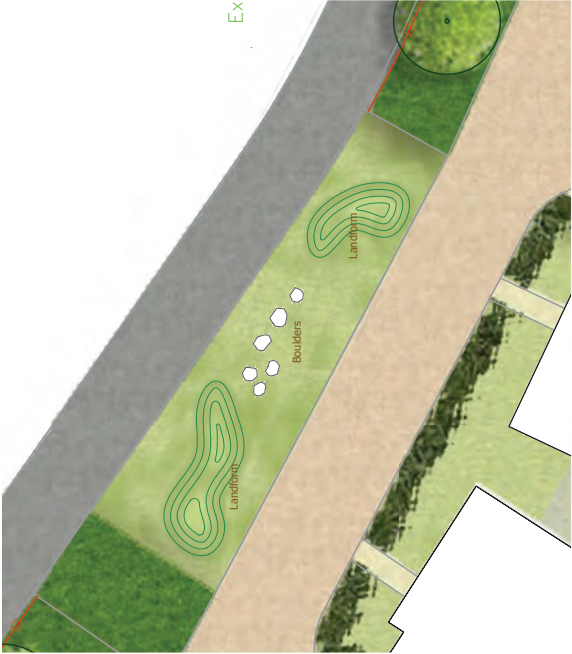
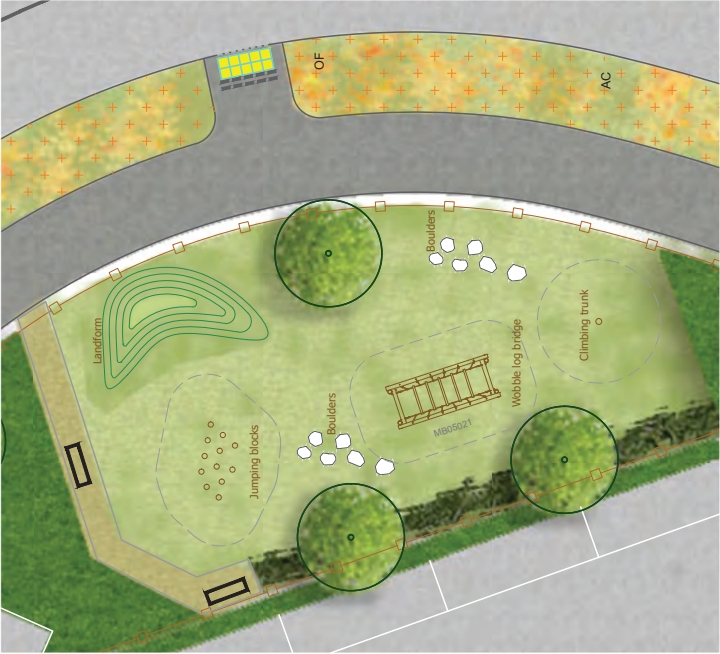
TC22029_Landscape plans[H].dwg 05 Sept 2025

These would provide the backbone of both the green/blue infrastructure within the development and provide connectivity across the site between the Central Wetland in the south-west and the Water Meadows at the north. They would provide sustainable drainage features within the development. Soft landscaping will determine the character of these areas, with an emphasis on species that are tolerant of the unpredictable water conditions. Large trees will provide separation from the adjacent residential areas, while species rich meadows and wetland planting would deliver both a range of habitats and seasonal variation.



03 May 2024

TC20209_Landscape plans(G)dwg



North Littlehampton:
Phase 5

Planting plan LA.PH5.101
1 of 8

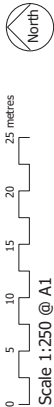
Key

Soft landscape

- Shrub and herbaceous plants
- Trees
- Specimen plants
- Climbing plants
- Amenity grass
- Species-rich grass
- Hedges

Surface finish

- Bitumen macadam carriageways & cycleways/ footways
- Herringbone block paving, Bracklen colour
- Herringbone block paving, Brindle colour
- Brecon compacted gravel
- Bark mulch



03 May 2024

TC2209_Landscape plans(G)dwg

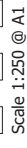








03 May 2024





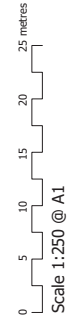
- Key**

Soft landscape

 - Shrub and herbaceous plants
 - Trees
 - Specimen plants
 - Climbing plants
 - Amenity grass
 - Species-rich grass
 - Hedges

Surface finish

 - Blumen macadam carriageway/cycleways/footways
 - Herringbone block paving, Bricks
 - Herringbone block paving, Bricks
 - Breedon compacted gravel
 - Bark mulch



North Littlehampton:
Phase 5

Planting plan LA.PH5.107
7 of 8



Key

Soft landscape

Shrub and herbaceous plants

Trees

Specimen plants

Climbing plants

Amenity grass

Species-rich grass

Hedges

Surface finish

Bitumen macadam carriageways & cycleways/ footways

Herringbone block paving, Bracklen colour

Herringbone block paving, Brindle colour

Brecon compacted gravel

Bark mulch

0 5 10 15 20 25 metres

Scale 1:250 @ A1

North

North Littlehampton:
Phase 5

Planting plan LA.PH5.108
8 of 8

Outline implementation specification

Ground preparation: Protect retained trees/areas of retained soil where structural landscaping is proposed in accordance with an approved Arboricultural Method Statement and Tree Protection Plan. Tree protection fencing shall be erected as noted within an Arboricultural Method Statement and Tree Protection Plan. The fence is to be maintained for the duration of the works. Protection of existing trees against damage to be in accordance with BS 5837:2012 - Trees in relation to design, demolition and construction - Recommendations. Protective fence to be approved by the LPA. Any excavations shall be in accordance with BS 8000 part 1:1989.

Landscape planting areas to have a minimum depth of soil of 500mm and grass areas will have 300mm.

Imported Subsoil: Where necessary, supply approved imported subsoil to B.S. 8601:2013 Specification for subsoil and requirements for use. Multipurpose subsoil to make up any deficiency in on-site subsoil.

- 200mm for planting areas
- 200mm for grass areas

Imported topsoil: Where necessary, supply approved imported topsoil to B.S. 3882:2015 Specification for topsoil - Multi-purpose topsoil to make up for any deficiency in on-site topsoil.

- 300mm for planting areas
- 100mm for grass areas

Backfilling: Backfill tree pits with 100/300mm depth subsoil and 400mm topsoil including Melbourn Topgrow peat free planting connect or similar amended at a rate of 0.125m³/net

Backfill shrub pits with topsoil including Melcourt Topgrow peat free planting compost or similar approved at a rate of 0.05 m³/200 mm².

Cultivation: Do not cultivate tree and shrub planting soils, only cultivate prior to planting if the soil is compacted (for example due to site construction activities). For grass seeding areas, cultivate topsoil to a loose friable thin suitable for grass seedling. Collect and remove from site all stones, builders' rubble and other deleterious material over 50mm in any dimension.

Grass Areas:

Grass Areas:
Supply and spread pre-seeding N:P:K fertiliser (10:15:10) at a rate of 30g/m²
Grass areas to be sown at a rate of 35g/m² with a suitable grass seed mix such as Germinal A19. Initial grass cutting and edge trimming down to 50mm

Planting Areas:

Planting Areas:
Excavations in order to win soil for re-use as part of landscaping must be undertaken in accordance with BS 3882:2015, BS 8601:2013 and the 2009 DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

Trees: excavate a few centimeters shallower than root-ball and twice its width with sloping, scarified sides. Root-balls of trees shall be set on a 150mm depth of horticultural grade sharp sand. Semi-Mature trees shall be set on a 400-450mm depth of horticultural grade sharp sand. Shrubs: over 200 x 200 x 200mm depth

Plant specifications: Plant specification to be in accordance with the HTA National Plant Specification: 03/02.

recommendations.

- Feathered Trees: 100g / tree pit rates;

- Heavy/Extra Heavy Standard Trees: 130g / tree pit
- Shrubs: 70g / m²

Tree stakes: Provide and fix tree stakes and ties to the following dimensions:

- **Paired Trees:** overall height 1200mm; height above ground: 600mm
- **Standard/Selected Standard Trees:** overall length 1500; height above ground: 750mm
- **Heavy/Extra Heavy Standard Trees:** overall length 1500; height above ground: 750mm

Provide and spread evenly over all planting areas an organic graded bark flakes or similar approved bark mulch to a depth of 50mm.

General Notes:

General notes.
Substitutions, if made, should be similar in size, form and water demand.
Plants shall be arranged to avoid straight lines and geometric patterns.

Maintenance:

All landscape areas to be maintained in accordance with B.S. 7370 Part 3:1991 and Part 4:1993; including weed control, and adjustment to tree stakes and ties.

Soft landscape areas to be maintained in accordance with **B.S. 7370 Part 3:1991** and Part 4; 1993. The maintenance of trees should be in accordance with **BS 3998:2010** and **BS 8545:2014**. Maintenance operations to successfully establish

Maintenance operations for successful plant establishment shall include watering; weed control; fertilizer application; pest control; and other operations as may be required to ensure the successful establishment of the plants. The contractor shall be responsible for the maintenance of the plants for the first 5 years after planting.

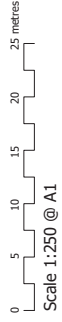
and disease control; pruning; and litter picking. Watering for trees should follow an irrigation plan in accordance with BS 8545:2014 and must be in anticipation of drought.

Tree pruning should be in the winter months or summer (July-August). Cherries must be pruned only in the summer months after flowering.

The replacement of failed trees should occur once reasons for failure have been identified and amendments to the specification are made as necessary. Shrubs which die, are removed or become seriously damaged shall be replaced in the same year as the original shrub was planted. Shrubs removed for reasons other than failure shall be replaced in the year following removal.

new landscape areas, the following maintenance programme shall be undertaken:

- | | |
|---|---|
|  | Bitumen macadam carriageways & cycleways/footways |
|  | Herringbone block paving, Bracken colour |
|  | Herringbone block paving, Brindle colour |
|  | Breedon compacted gravel |
|  | Bark mulch |



TC22029_Landscape plans[G].dwg



Header

Trees		Abbreviation	Species	Height	Specification	Grth	Density
Total -421 -	2 -	Ac	Acer campestre	400-450cm	3x; Extra Heavy Standard; clear stem minimum 200cm; 5 breaks; B	14-16cm	Counted
	3 -	ACE	Acer campestre 'Bijljk'	400-450cm	3x; Extra Heavy Standard; clear stem minimum 200cm; RB	16-18cm	Counted
	4 -	A 'A'	Acer rubrum 'Armstrong'	400-450cm	3x; Extra Heavy Standard; 5 bks; 3x; RB; Clear Stem min. 200cm	14-16cm	Counted
	4 -	Bpe	Betula pendula	400-450cm	3x; Extra Heavy Standard; clear stem minimum 200cm; RB	16-18cm	Counted
	4 -	Bpu	Betula pubescens	350-425cm	3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks; RB	12-14cm	Counted
	2 -	B u	Betula utilis jacquemontii	400-450cm	3x; Extra Heavy Standard; 5 bks; 3x; RB; Clear Stem 175-200cm	14-16cm	Counted
	1 -	BuJM	Betula utilis jacquemontii 'Moonbeam'	400-450cm	3x; Extra Heavy Standard; 5 bks; 3x; RB; Clear Stem min 175-200cm	14-16cm	Counted
	277 -	F s	Fagus sylvatica	60-80cm	Transplant 1+2: 3 bks	14-16cm	Counted
	3 -	L 't W'	Liquidambar styraciflua 'Worpleston'	400-450cm	3x; Extra Heavy Standard; 5 bks; 3x; RB; Clear Stem 175-200cm	14-16cm	Counted
	1 -	M 'J D'	Malus 'John Downie'	400-450cm	3x; Extra Heavy Standard; 5 bks; 3x; RB; Clear Stem 175-200cm; 4 breaks; B	14-16cm	Counted
	3 -	Mey	Malus sylvestris	250-300cm	2x; Semi-mature; clear stem 175-200cm; 4 breaks; B	8-10cm	Counted
	8 -	P x h	Philadelphus x hispánica	500-550cm	3x; Semi-mature; clear stem minimum 200cm; RB	20-25cm	Counted
	5 -	P ar 'R'	Prunus avium 'Randy'	400-450cm	3x; Extra Heavy Standard; 5 bks; 3x; RB; Clear Stem 175-200cm	14-16cm	Counted
	7 -	PC	Prunus cerasifera 'Chanticleer'	500-550cm	3x; Semi-mature; clear stem minimum 200cm; RB	20-25cm	Counted
	11 -	PC	Prunus cerasifera 'Chanticleer'	400-450cm	3x; Extra Heavy Standard; clear stem minimum 200cm	16-18cm	Counted
	8 -	Ql	Quercus ilex	200-250cm	Feathered; 9 breaks; C	14-16cm	Counted
	2 -	ROBFRUA	Robinia pseudacacia 'Frisia'	400-450cm	3x; Extra Heavy Standard; 5 bks; 3x; RB; Clear Stem 175-200cm	14-16cm	Counted
	4 -	Ssr	Sorbus aria	400-450cm	3x; Extra Heavy Standard; clear stem minimum 200cm; B	16-18cm	Counted
	9 -	Ssu	Sorbus aucuparia	400-450cm	3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks; RB	14-16cm	Counted
	30 -	T co 'G'	Tilia cordata 'Greenspire'	500-550cm	3x; Semi-mature; clear stem minimum 200cm; RB	20-25cm	Counted
30 -	T co 'G'	Tilia cordata 'Greenspire'	400-450cm	3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks	14-16cm	Counted	

Shrubs		Abbreviation	Species	Pot Size	Height	Specification	Density
888 -	A 'G'	Aethes 'Gloria'	2L	Full Pot: C	0.5Cr		
214 -	B 'Sun'	Brachyglottis 'Sunshine'	5-7.5L	Branched: 6 bks; C	0.7Cr		
274 -	C 'A' P'	Corylus 'Aster Pearl'	5L	30-40cm	Bushy; 6 bks; C	0.7Cr	
940 -	CHOTE	Chrysos ternata	7.5L	40-60cm	Bushy; 6 breaks	1Cr	
1300 -	Cc	Cistus corbarentis	5-7.5L	40-60cm	Bushy; 6 breaks	0.7Cr	
131 -	C al 'S'	Cornus alba 'Sibirica'	5L	60-80cm	Branched; 4 breaks	1Cr	
115 -	C s 'P'	Cornus stolonifera 'Flaviramea'	3L	60-80cm	Branched; 4 bks; C	0.7Cr	
102 -	C av	Corylus avellana	5L	40-60cm	Branched: 3 bks; C	0.7Cr	
444 -	E 'D' R'	Eucomia 'Donard Radiance'	3L	60-80cm	Bushy; 5 breaks	0.6Cr	
1136 -	E 'F Dab	Eunymus fortunei 'Dart's Blanket'	3L	25-30cm	Bushy; 9 breaks	0.7Cr	
243 -	E 'F E' G'	Eunymus fortunei 'Emerald Gaiety'	5-7.5L	30-40cm	Bushy; 5 bks; C	0.75Cr	
266 -	Gl	Griselinia littoralis	10L	60-80cm	Bushy; 9 breaks	1Cr	
150 -	H 'G' O'	Hebe 'Great Orme'	5L	30-40cm	Bushy; 5 bks; C	0.75Cr	
1079 -	H 'C' R'	Heuchera 'Chocolate Ruffles'	2L	Full Pot: 1 or 2 Buds; C	0.45Cr		
238 -	H 'F' A'	Hosta fortunei 'Aureomarginata'	2L	Full Pot: 7 bks; C	0.3Cr		
273 -	H 'H'	Hypericum 'Hidcot'	7.5L	Bushy; 7 bks; C	0.7Cr		
10 -	JaXT	Jlex aquifolium 'J.C. van Tol'	70-90L	Leader with laterals	Counted		
663 -	L an 'H'	Lavandula angustifolia 'Hidcot'	7.5L	30-40cm	Bushy; 9 breaks	0.7Cr	
217 -	L an 'H'	Lavandula angustifolia 'Hidcot'	7.5L	30-40cm	Bushy; 9 breaks	0.7Cr	
830 -	L nrv	Lonicera nidula 'May Green'	7.5L	40-60cm	Bushy; 9 breaks	1Cr	
880 -	L nrv	Luzula nivea	2L	Full Pot: C	0.3Cr		
124 -	O x h	Oleandra x haastii	40-60cm	Bushy; 5 bks; C	0.75Cr		
1175 -	PACTE	Pachysandra terminalis	3L	Several shoots; 9 breaks	0.55Cr		
171 -	P 'B' S'	Perovskia 'Blue Spike'	2L	Bushy; 3 bks; C	0.5Cr		
18 -	P 'B' S'	Perovskia 'Bronze Baby'	10L	60-80cm	Triple Crown; C	Counted	
11 -	PHOSU	Phormium 'Sundowner'	10L	60-80cm	Triple crown ;C	Counted	
81 -	PHOTO	Phormium tenax	10L	60-80cm	Triple crown ;C	Counted	
7 -	P 'J' M' P'	Pieris japonica 'Mountain Fire'	7.5L	40-60cm	Bushy; 6 bks; C	0.71Cr	
1328 -	P 'F' A'	Potentilla fruticosa 'Abbotswood'	5-7.5L	Bushy; 5 breaks	0.7Cr		
215 -	P 'F' T'	Potentilla fruticosa 'Tangerine'	5-7.5L	Bushy; 5 bks; C	0.71Cr		
1101 -	P 'lau' O' L'	Prunus laurocerasus 'Otto Luyken'	5-7.5L	Bushy; 5 bks; C	0.7Cr		
398 -	R of 'M' J Lf	Rosmarinus officinalis 'Miss Jessopp's Upright'	5L	30-40cm	Bushy; 7 bks; C	0.52Cr	
274 -	S h d	Sarcococca hookeriana digyna	7.5L	30-40cm	Bushy; 7 bks; C	0.72Cr	
103 -	S 'J' F'	Skimmia japonica 'Fragrans'	7.5L	40-60cm	Bushy; 4 bks; C	0.62Cr	
86 -	V d	Viburnum davidii	5-7.5L	30-40cm	Bushy; 4 bks; C	0.72Cr	

LEAP/LAP:

Rubber Mulch by Redlynch Leisure, or similar. Product: Tiger Mulch.



Autumn

Green

Beige

Herbaceous	Abbreviation	Species	Pot Size	Specification	Density
147 -	C x A 'P'	Calamagrostis x acutiflora 'Karl Foerster'	3L	Full Pot: C	0.5Cr
242 -	C bu	Carex buchananii	7.5L	Full Pot: C	0.5Cr
38 -	Un	Luzula nivea	2L	Full Pot	0.5Cr
571 -	PHLU	Phlox russelliana	3L	Full Pot: C	0.5Cr

Climbers	Number	Abbreviation	Species	Pot Size	Height	Specification	Density
	37 -	C am	Clematis armandii	3L	60-80cm	Several Shoots: 2 bks :Camed	Counted
	1 -	C am	Clematis armandii	10L	100-150cm	Camed; several shoots; 3 breaks	Counted
	2 -	CLCARAPB	Clematis armandii 'Apple Blossom'	2L	60-80cm	Several Shoots: 2 bks :Camed	Counted
	5 -	HEDE	Hedera helix	2L	40-60cm	Several Shoots: 3 bks	Counted
	8 -	PARQU	Parthenocissus quinquefolia	10L	100-150cm	Camed; several shoots; 3 breaks	Counted

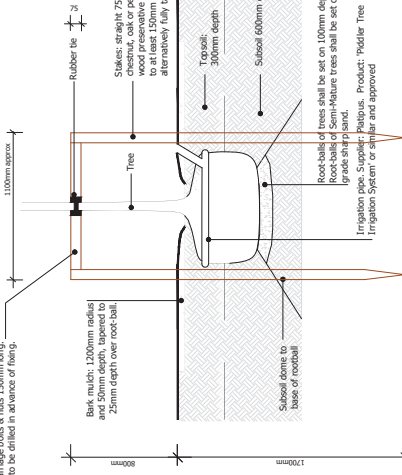
Grasses	Abbreviation	Species	Specification	Density
328 -	C bu	Carex buchananii	Full Pot: C	0.7Cr
379 -	D c 'G'	Deschampsia cespitosa 'Goldscheider'	Full Pot: C	0.6Cr

Watermeadows - plant mix		Number	Abbreviation	Height	Species	Specification	Density	Pot Size	Percentage Contribution
		136 -	C 'A' P'	30-40cm	Chioysia 'Aster Pearl'	Bushy; 6 bks; C	0.7Cr	5L	30%
		91 -	H 'G' O'	30-40cm	Hebe 'Great Orme'	Bushy; 5 bks; C	0.7Cr	5L	20%
		113 -	O x h	40-60cm	Oleandra x haastii	Bushy; 5 bks; C	0.7Cr	5-7.5L	25%
		68 -	ROSOPHDU	30-40cm	Rosmarinus offi. 'Miss Jessopp's Upright'	Bushy; 5 bks; C	0.7Cr	5L	15%
		46 -	S h d	30-40cm	Sarcococca hookeriana digyna	Bushy; 7 bks; C	0.7Cr	7.5L	10%
		Total -454 -							

Central Wetland Edge - plant mix		Number	Abbreviation	Height	Species	Specification	Pot Size	Density	Percentage Contribution
330 -	B 'Sun'	40-60cm	Brachyglottis 'Sunshine'	Branched: 6 bks; C	5-7.5L	0.7Cr	20%		
167 -	GakF	Calamagrostis x acutiflora 'Karl Foerster'	C	5L	0.7Cr	10%			
167 -	CAR BUC	Carex buchananii	C	5-7.5L	0.7Cr	10%			
491 -	C s 'P'	60-80cm	Cornus stolonifera 'Flaviramea'	Branched: 4 bks; C	3L	0.7Cr	30%		
226 -	DcG	Deschampsia cespitosa 'Goldtau'	C	3L	0.6Cr	10%			
330 -	P 'F' A'	Potentilla fruticosa 'Abbotswood'	Bushy; 5 bks; C	5-7.5L	0.7Cr	20%			
Total -1711 -									

SUDS - plant mix	Number	Abbreviation	Height	Species	Specification	Density	Pot Size	Percentage Contribution
	563 -	ACO OGO		Acorns gramineus 'Ogan'	C	0.55Cr	5L	10%
	563 -	CarPen		Carex pendula	C	0.55Cr	3L	10%
	475 -	CARCLHB	30-40cm	Caryopteris dandion. 'Heavenly Blue'	Branched: 4 breaks; C	0.6Cr	3L	10%
	353 -	CaS	40-60cm	Cornus alba 'Sibirica'	Branched: 3 breaks; C	0.7Cr	3L	10%
	353 -	CaSp	40-60cm	Cornus alba 'Spaethii'	Branched: 4 breaks; C	0.7Cr	3L	10%
	563 -	DcG		Deschampsia cespitosa 'Goldtau'	C	0.55Cr	2L	10%
	475 -	Irisps		Iris pseudacorus	Full pot	0.6Cr	1.5-2L	10%
	839 -	NEGIAA		Nepeta 'Six Hills Giant'	C	0.45Cr	2L	10%
	839 -	SCHCOM		Schizostylis coccinea 'Major'	C	0.45Cr	2L	10%
	839 -	V b		Verbena bonariensis	Full pot	0.45Cr	3L	10%
	Total -5862 -							

Timber cross member 75 x 40mm in cross section.
The length will depend on the distance between the two stakes.
To be related to the subsoil (optional carriage bolts & nuts 150mm long.
(cross members & stakes to be drilled in advance of fitting.



Tree staking: Scale 1:20 @ A1

North Littlehampton:
Phase 5

Materials, LA.PH5.109
Tree Pit and Plant
Schedules

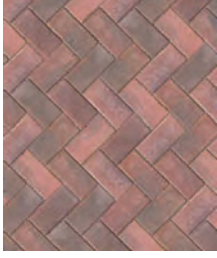
LEAP/LAP:
Self-binding gravel



Shared / private driveways:
Marshalls block paving, Bracken
colour



Raised junctions:
Marshalls block paving,
Brindle colour



SuDS within the Central Wetland Area (CWA) and Phase 5 residential area consists of

- 'narrow' swales and depressions/basins within the CWA, and wide swales within Phase 5.
- In addition, the CWA has been designed by Mayer Brown to act as a basin for storing water if the Black Ditch watercourse to the north becomes flooded. The housing parcels either side of the CWA are on elevated land. The wide swales within Phase 5 will store rainwater runoff from hard surfaces and will be directed towards the CWA where it will be conveyed through the smaller swales and out the site in the south.

The swales within the **CWA** are approximately 3 metres wide and 400mm deep with 1:3 side slopes. They are relatively shallow depressions and are intended to be dry features throughout most of the year. The larger depressions within the CWA are approximately 1.0m deep, with 1:3 side slopes. It is anticipated that the depressions will be damp throughout most of the year which will support vegetation tolerant of minor inundations and damp conditions which will also help to enhance biodiversity and visual interest through increasing species diversity.

The wide swales within **Phase 5** are approximately 1.5m wide and 2 metres deep with 1:3 side slopes. The base of the swales are approximately 1.5m wide and are generally flat. The swales are intended to be relatively dry features throughout the year.

The swales within the **CWA** and **Phase 5** will help to filtrate oil pollutant and manage the flow of surface water run-off before it exits the site.

Vegetation within the **CWA** basin will include:

- Native tree and shrubs (whips planted from day 1)
 - Tree planting (Standard/ Selected Standard/ Heavy Standard/ Extra Heavy Standard/ Semi-mature sizes/ Multi-stem to be implemented from day 1)
 - Anemity grass (kept short)
 - Species-rich grass (kept long)
 - Areas of natural regeneration
 - Hazel coppice
 - Reed beds
 - Marginal aquatics.
- Anemity grass within the narrow swales through the **CWA** will be kept short to 40mm high (cut regularly throughout the year) to ensure that the SuDS function correctly and convey water.

Species-rich grass elsewhere within the **CWA** will be left to grow long to encourage grasses to flower for interest and to enhance biodiversity. It is intended that the long grass areas will only be cut once a year following establishment. Refer to the notes relating to Species-Rich grass - "Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower."

Vegetation within the **Phase 5** wide swales will also include Species-rich grass, left to grow long.

Implementation programme

Proposed vegetation within the **CWA** and **Phase 5** shall be implemented during the first planting season after the hard landscape has been constructed to prevent damage to the new vegetation and to avoid compaction of soils. Avoid planting if the ground is waterlogged or if the ground is frozen.

Climatic conditions need to be observed with no planting/maintenance to be carried out in extremes of temperature <3°C or > 24°C (without suitable provision for irrigation). If the water supply is, or is likely to be, restricted by emergency legislation then planting/maintenance should be suspended.

Container grown plants can be planted at any time of the year subject to weather conditions.

Brief maintenance objectives will include regular planting checks and maintenance to ensure that the planting is establishing, and the SuDS elements are consistent with the original design intentions. This will involve continuous / ongoing routine operations throughout the year, for which a detailed maintenance schedule is to be followed.

Regular maintenance and monitoring inspections of rain gardens should be undertaken to maintain SuDS performance and balance. Management and maintenance commitments would be more intense during the in initial establishment period, 1-2 years after planting. This would involve:

- Watering (as necessary)
- Weed control
- Pest and disease control
- Pruning
- Checking and clearing of inlets and outlets
- Mulching (not bark mulch), and
- Litter picking.

Filter media

The filter medium should be sufficiently permeable to allow water to pass through it, so that the surface of the retention area does not become

waterlogged. It also needs to contain sufficient organic material and plant nutrients to support the proposed vegetation.

Filter media should be correctly specified. Any specification should take into account site specific requirements and constraints. The specification parameters should be clearly stated, so that in the event that a supplier ceases trading the filter material can still be replaced on a like for like basis.

Incorrect specification can cause reduced hydraulic conductivity through over compaction or structural collapse, leading to reduction in treatment capacity and surface ponding, loss of vegetation etc. The filter medium should be correctly installed with an appropriate level of compaction during installation to prevent migration of fine particles.

A filter medium that is placed uncompacted will initially show a very high hydraulic conductivity which will then rapidly decrease. So it is essential that testing of hydraulic conductivity be carried out on the compacted filter medium before installation.

A typical specification for the filter media:

day and silt (< 0.063 mm) < 5%

fine sand (0.063-0.2 mm) <20%

medium sand (0.2-0.6 mm) 35% to 65%

coarse sand (0.60-2.0 mm) 50% to 60%

fine gravel (2.0-6.0 mm) <10%

The filter medium should be well graded, and the composition should contain limited particle size range.

Organic matter content

Organic matter content should be 3-5% (w/w).

pH

pH should be 5.5-8.5 (1:2.5 soil/water extract).

Electrical conductivity (salinity)

Electrical conductivity (EC) should be < 3300 µS/cm (1:2.5 soil/CaSO4 extract)

Major plant nutrients

Total nitrogen should be 0.10-0.30%

Extractable phosphorus should be 16-100 mg/l

Extractable potassium should be 120-900 mg/l

(Methods of analysis in accordance with BS 3882:2015, unless otherwise stated.)

Outline implementation specification

Ground preparation: Protect retained trees/areas of retained soil where structural landscaping is proposed in accordance with an approved Arboricultural Method Statement and Tree Protection Plan. Tree protection fencing shall be erected as noted within an Arboricultural Method Statement and Tree Protection Plan. The fence is to be maintained for the duration of the works. Protection of existing trees against damage to be in accordance with the BS 5837:2012 - 'Trees in relation to design, demolition and construction - Recommendations. Protective fence to be approved by the LPA. Any excavations shall be in accordance with B.S. 8000 part 11:1989.

Landscape planting areas to have a minimum depth of soil of 500mm and grass areas will have 300mm. Loosen formation level with angle iron 'ripper' driven 450mm deep at 1m centres, when ground conditions are dry.

Imported Subsoil: Where necessary, supply approved imported subsoil to B.S. 8601:2013 Specification for subsoil and requirements for use - Multipurpose subsoil to make up any deficiency in on-site subsoil. Spread and level to depth of:

- 200mm for planting areas
- 200mm for grass areas

Imported topsoil: Where necessary, supply approved imported topsoil to B.S. 3882:2015 Specification for topsoil - Multipurpose topsoil to make up for any deficiency in on-site topsoil.

- Spread and level to depth of
- 300mm for planting areas
- 100mm for grass areas

Backfilling: Backfill tree pits with 100/300mm depth subsoil and 400mm topsoil including Melcourt Topgrow peat free planting compost or similar approved at a rate of 0.125m³/pit.

Backfill shrub pits with topsoil including Melcourt Topgrow peat free planting compost or similar approved at a rate of 1.0m³/20m².

Cultivation: Do not cultivate tree and shrub planting soils, only cultivate prior to planting if the soil is compacted (for example due due site/construction activities). For grass seeding areas, cultivate topsoil to a loose friable tilth suitable for grass seeding. Collect and remove from site all debris, rubble and other deleterious material over 30mm in any dimension.

Species-rich grass refer to the adjacent notes.

Amenity grass areas: Supply and spread pre-seeding NPK, fertiliser (10:15:10) at a rate of 30g/m²

Grass areas to be sown at a rate of 35g/m² with a suitable grass seed mix such as Germinat A19. Initial grass cutting and edge trimming down to 40mm.

Planting Areas:

Excavation: Any excavations in order to win soil for re-use as part of landscaping must be undertaken in accordance with BS 3882:2015, BS 8601:2013 and the 2009 DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

Trees: excavate a few centimetres shallower than root-ball and twice its width with sloping, scarified sides. Root balls of trees shall be set on a 150mm depth of horticultural grade sharp sand. Semi-Mature trees shall be set on a 400-450mm depth of horticultural grade sharp sand. Shrubs excavate 3.0 x 3.0 x 3.00mm depth.

Plant specifications: Plant specification to be in accordance with the HTA National Plant Specification 03/202.

Tree planting to be in accordance with BS 8545:2014 - 'Trees from nursery to independence in the landscape recommendations.

Fertiliser: Supply and plant, incorporating slow release fertiliser NPK-4:19:10 ENMAg or similar approved at the following rates:

- Feathered Trees: 100g / tree pit
- Standard/Selected Standard Trees: 100g / tree pit
- Heavy/Extra Heavy Standard Trees: 130g / tree pit
- Shrubs: 70g / m²

Tree stakes: Provide and fix tree stakes and ties to the following dimensions:

- Feathered Trees: overall length 1250mm; height above ground: 600mm
- Standard/Selected Standard Trees: overall length 1500; height above ground: 750mm
- Heavy/Extra Heavy Standard Trees: overall length 1500; height above ground: 750mm

Tree shelters: Provide and fix tree/shrub shelters to the native planting plants, such as Tubex Easywrap Trees Shelter Guard by Green Tech, or similar and approved.

Provide and spread evenly over all planting areas an organic graded bark flakes or similar approved bark mulch to a depth of 50mm.

General Notes:

Substitutions, if made, should be similar in size, form and water demand. Plants shall be arranged to avoid straight lines and geometric patterns.

Maintenance

All landscape areas to be maintained in accordance with B.S. 7370 Part 3:1991 and Part 4:1993. The maintenance of trees should be in accordance with **BS 3998:2010** and **BS 8545:2014**. Maintenance operations to successfully establish plants shall be carried out for the first 5 years after planting.

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Soft landscape areas to be maintained in accordance with **B.S. 7370**

North Littlehampton: Central Wetland Area

Landscape Strategy LA.1



- Key
- Application area

SuDS Landscaping to be detailed up in future RM phase application

1



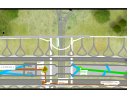
Wetland area: Pond to be created for interest and to increase the potential for species diversity. Pond to include aquatic plants, rushes and reeds. A footpath link at low level to be provided at the north with a boardwalk where appropriate. Tree and shrub planting provided at the edge of the development plateaux to allow for open uninterrupted views towards the north, to the hills within the National Park.

2



Parkland area: retained trees to be bolstered with new native tree and shrub planting, and hazel coppice, to create an area for informal recreation. Footpaths at low level to be provided with boardwalks where appropriate. Long grass / species rich grass and wildflowers to be established.

3



Open views provided across the wetland to the north and south from the bridge. Tree and shrub planting positioned strategically on the embankments, at both ends, to ensure that views from the bridge are maintained.

4



Tree planting positioned at the top of the bank, to provide an edge to the development and define the wetland area.

5



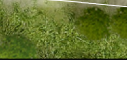
Existing trees to be retained

6



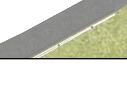
Large specimen native trees.

7



Native tree and shrub planting

8



3m wide shared asphalt path
- 0 10 20 30 40 50 100 metres

Scale 1:1,000 @ A1

TC22029_A088461-LA1-LA10[G].dwg

03 December 2025



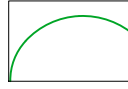
LANDSCAPE ARCHITECTS

Floor 7, Brunel House, 2 Fitzalan Road, Cardiff, CF24 0EB

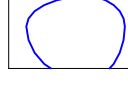
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Key



Existing Category A trees to be retained



Existing Category B trees to be retained



Existing Category C trees to be retained



Root protection areas of existing trees



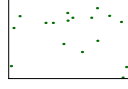
Native tree and shrub planting: whips/transplants to be implemented from day 1.



Native mix 2: tree and shrub planting: whips/transplants to be implemented from day 1.



Proposed native tree planting: Standard/ Selected Standard/ Heavy Standard/ Extra Heavy Standard/ Semi-mature sizes/ Multi-stem to be implemented from day 1.



Proposed species-rich grass/ natural regeneration: to be kept long and cut once a year



Proposed species-rich grass: to be kept short and cut regularly throughout the year



Grass reinforcement



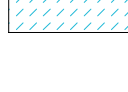
Hazel coppice



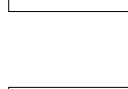
Reed bed planting/ natural regeneration



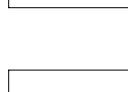
Marginal aquatics



Bark mulch path through trees with stone edging. No dig through trees



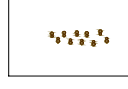
Pond to capture and hold water for interest



Lighting columns



Timber bench (9no. including along top edge of wetland)



Bin (9no. including along top edge of wetland)



Jupiter Play (or similar) Trunk Pile



Jupiter Play (or similar) Stepping Stilts



Boulders



Protection to shared use path: 1.5m high post and 3 rail timber fence



Bubbles denote regularisation of planting areas December 2025

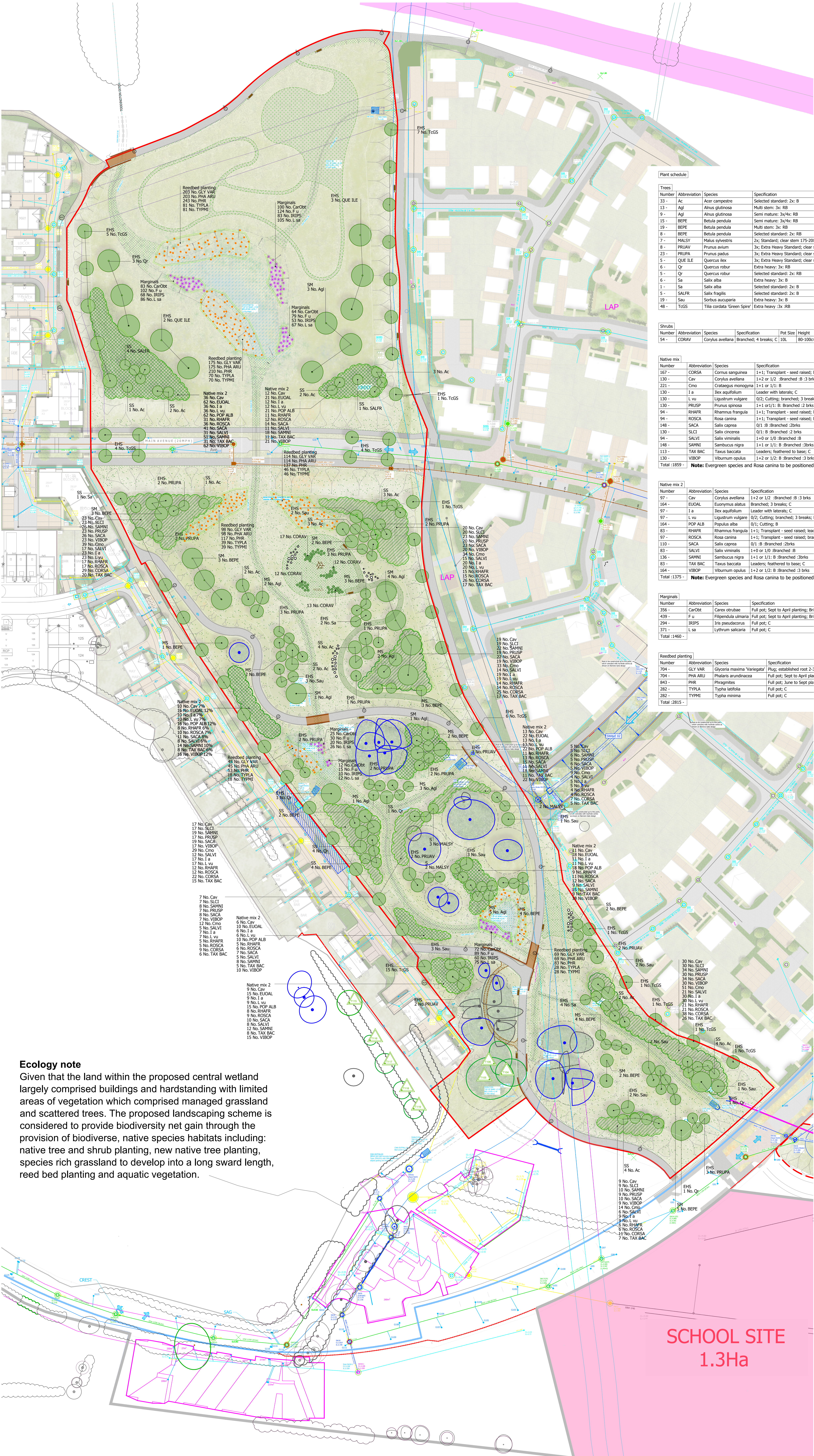


0 10 20 30 40 50 metres



North

Scale 1:500 @ A0



Plant schedule

Trees					
Number	Abbreviation	Species	Specification	Girth	Height
33	Ac	Acer campestre	Selected standard: 2x: B	10-12cm	300-350cm
13	Ag	Alnus glutinosa	Multi stem: 3x: RB	20-25cm	550-600cm
9	Ag	Alnus glutinosa	Semi mature: 3x/4x: RB	20-25cm	550-600cm
15	BEPE	Betula pendula	Semi mature: 3x/4x: RB	20-25cm	550-600cm
19	BEPE	Betula pendula	Multi stem: 3x: RB	20-25cm	550-600cm
9	BEPE	Betula pendula	Selected standard: 2x: RB	10-12cm	300-350cm
7	MALSY	Malus sylvestris	2x: Standard; clear stem 175-200cm; 4 breaks; B	6-10cm	250-300cm
8	PRUAV	Prunus avium	3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks; B	14-16cm	400-450cm
23	PRUAV	Prunus padus	3x; Extra Heavy Standard; clear stem 175-200cm; 5 breaks; B	14-16cm	400-450cm
5	QUE ILE	Quercus ilex	3x; Extra Heavy Standard; clear stem 175-200cm; RB	18-20cm	450-625cm
6	Qr	Quercus robur	Extra heavy: 3x: RB	18-20cm	450-600cm
5	Qr	Quercus robur	Selected standard: 2x: RB	10-12cm	300-350cm
6	Sa	Salix alba	Extra heavy: 3x: B	16-18cm	400-450cm
1	Sa	Salix alba	Selected standard: 2x: B	10-12cm	300-350cm
5	SALFR	Salix fragilis	Selected standard: 2x: B	10-12cm	300-350cm
19	Sau	Sorbus aucuparia	Extra heavy: 3x: B	16-18cm	400-450cm
48	TcGS	Tilia cordata 'Green Spire'	Extra heavy :3x :RB	16-18cm	450-500cm

Shrubs

Number	Abbreviation	Species	Specification	Pot Size	Height	Density
54	CORAV	Corylus avellana	Branched; 4 breaks; C	10L	80-100cm	Counted

Native mix

Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution
167	CORSA	Cornus sanguinea	1+1; Transplant - seed raised; branched; 3 breaks; B	60-80cm	1.25Cr	9%	
130	Cav	Cornus avellana	1+2 or 1/2 :Branched :B :3 brks	60-80cm	1.25Cr	7%	
221	Cmo	Cotoneaster monogyna	1+1 or 1/1 :B	60-80cm	1.25Cr	12%	
130	1a	Ilex aquifolium	Leader with laterals; C	60-80cm	3L	1.25Cr	7%
130	Lvu	Ligustrum vulgare	0/2; Cutting; branched; 3 breaks; B	60-80cm	1.25Cr	7%	
130	PRUSP	Prunus spinosa	1+1 or 1/1 :B :Branched :2 brks	60-80cm	1.25Cr	7%	
94	RHAFR	Rhamnus frangula	1+1; Transplant - seed raised; leader with laterals; 3 breaks; B	60-80cm	1.25Cr	5%	
94	ROSCA	Rosa canina	1+1; Transplant - seed raised; branched; 3 breaks; B	60-80cm	1.25Cr	5%	
148	SACA	Salix caprea	0/1 :B :Branched :2 brks	60-80cm	1.25Cr	9%	
130	SLCI	Salix cinerea	0/1 :B :Branched :2 brks	60-80cm	1.25Cr	7%	
94	SALVI	Salix viminalis	1+0 or 1/0 :Branched :B	30-40cm	1.25Cr	5%	
148	SAMNI	Sambucus nigra	1+1 or 1/1 :B :Branched :3 brks	60-80cm	1.25Cr	10%	
113	TAX BAC	Taxus baccata	Leaders; feathered to base; C	40-60cm	3L	1.25Cr	6%
130	VIBOP	Viburnum opulus	1+2 or 1/2 :B :Branched :3 brks	60-80cm	1.25Cr	7%	
Total :1859 - Note: Evergreen species and Rosa canina to be positioned on drier land							

Native mix 2

Number	Abbreviation	Species	Specification	Density	Pot Size	Height	Percentage Contribution
97	Cav	Corylus avellana	1+2 or 1/2 :Branched :B :3 brks	1.25Cr		60-80cm	7%
164	EUOAL	Eucalyptus alatus	Branched; 3 breaks; C	1.25Cr	3L	30-40cm	12%
97	1a	Ilex aquifolium	Leader with laterals; C	1.25Cr	3L	60-80cm	7%
97	Lvu	Ligustrum vulgare	0/2; Cutting; branched; 3 breaks; B	1.25Cr		60-80cm	7%
164	POP ALB	Populus alba	0/1; Cutting; B	1.25Cr		60-80cm	12%
83	RHAFR	Rhamnus frangula	1+1; Transplant - seed raised; leader with laterals; 3 breaks; B	1.25Cr		60-80cm	6%
97	ROSCA	Rosa canina	1+1; Transplant - seed raised; branched; 3 breaks; B	1.25Cr		60-80cm	7%
110	SACA	Salix caprea	0/1 :B :Branched :2 brks	1.25Cr		60-80cm	8%
83	SALVI	Salix viminalis	1+0 or 1/0 :Branched :B	1.25Cr		30-40cm	6%
136	SAMNI	Sambucus nigra	1+1 or 1/1 :B :Branched :3 brks	1.25Cr		60-80cm	10%
83	TAX BAC	Taxus baccata	Leaders; feathered to base; C	1.25Cr	3L	40-60cm	6%
164	VIBOP	Viburnum opulus	1+2 or 1/2 :B :Branched :3 brks	1.25Cr		60-80cm	12%
Total :1375 - Note: Evergreen species and Rosa canina to be positioned on drier land							

Marginals

Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution
356	CarObt	Carex otrubae	Full pot; Sept to April planting; British native-origin; C	1L	0.5Cr	30%
439	Fu	Filipendula ulmaria	Full pot; Sept to April planting; British native-origin; C	1L	0.45Cr	30%
294	IRIPS	Iris pseudacorus	Full pot; C	0.5L	0.45Cr	20%
371	Lsa	Lythrum salicaria	Full pot; C	0.5L	0.4Cr	20%
Total :1460 -						

Reedbed planting

Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution
704	GLY VAR	Glyceria maxima 'Variegata'	Plug; established root 2-3 months minimum; Sept to April planting; British native-origin; 500c min	0.7Cr	25%	
704	PHI ARU	Phalaris arundinacea	Full pot; Sept to April planting; British native-origin; C	1-1.5L	0.7Cr	25%
843	PHR	Phragmites	Full pot; June to Sept planting; British native-origin; C	1-1.5L	0.7Cr	30%
282	TYPLA	Typha latifolia	Full pot; C	1L	0.7Cr	10%
282	TYPMI	Typha minima	Full pot; C	1L	0.7Cr	10%
Total :2815 -						

S: Standard
SS: Selected Standard
HS: Heavy Standard
EHS: Extra Heavy Standard
SM: Semi Mature
SM: Multi-Stem

- Existing Category A trees to be retained
- Existing Category B trees to be retained
- Existing Category C trees to be retained
- Root protection areas of existing trees
- Native tree and shrub planting: whips/transplants to be implemented from day 1.
- Native mix 2: tree and shrub planting: whips/transplants to be implemented from day 1.
- Proposed native tree planting: Standard/ Selected Standard/ Heavy Standard/ Extra Heavy Standard/ Semi-mature sizes/ Multi-stem to be implemented from day 1.
- Proposed species-rich grass/ natural regeneration: to be kept long and cut once a year
- Proposed species-rich grass: to be kept short and cut regularly throughout the year
- Grass reinforcement
- Hazel coppice
- Reed bed planting/ natural regeneration
- Marginal aquatics
- Bark mulch path through trees with stone edging. No dig through trees
- Pond to capture and hold water for interest
- Lighting columns
- Timber bench (9no. including along top edge of wetland)
- Bin (9no. including along top edge of wetland)
- Jupiter Play (or similar) Trunk Pile
- Jupiter Play (or similar) Stepping Stilts
- Boulders
- Protection to shared use path: 1.5m high post and 3 rail timber fence

Ecology note

Given that the land within the proposed central wetland largely comprised buildings and hardstanding with limited areas of vegetation which comprised managed grassland and scattered trees. The proposed landscaping scheme is considered to provide biodiversity net gain through the provision of biodiverse, native species habitats including: native tree and shrub planting, new native tree planting, species rich grassland to develop into a long sward length, reed bed planting and aquatic vegetation.

SCHOOL SITE
1.3Ha

SuDS within the Central Wetland Area (CWA) and Phase 5 residential area consists of

- 'narrow' swales and ponds within the CWA, and wide swales within Phase 5.
- In addition, the CWA has been designed by Mayer Brown to act as a basin for storing water if the Black Ditch watercourse to the north becomes flooded. The housing parcels either side of the CWA are on elevated land. The wide swales within phase 5 will store rainwater runoff from hard surfaces and will be directed towards the CWA where it will be conveyed through the smaller swales and out the site in the south.

The swales within the **CWA** are approximately 3 metres wide and 400mm deep with 1:3 side slopes. They are relatively shallow depressions and are intended to be dry features throughout most of the year. The larger features within the CWA are approximately 1.0m deep with 1:3 side slopes. These are ponds. It is anticipated that the ponds will be damp or hold water throughout most of the year which will support vegetation tolerant of inundations and damp conditions which will also help to enhance biodiversity and visual interest through increasing species diversity.

The wide swales within **Phase 5** are approximately 1.5m wide and 2 metres deep with 1:3 side slopes. The base of the swales are approximately 1.5m wide and are generally flat. The swales are intended to be relatively dry features throughout the year.

The swales within the **CWA** and **Phase 5** will help to filtrate out pollutant and manage the flow of surface water run-off before it exits the site.

Vegetation within the **CWA** basin will include:

- Native tree and shrubs (whips planted from 'day 1')
- Tree planting (Standard/ Selected Standard/ Heavy Standard/ Extra Heavy Standard/ Semi-mature sizes/ Multi-stem to be implemented from day 1)

- Amenity grass (kept short)
 - Species-rich grass (kept long)
 - Areas of natural regeneration
 - Hazel coppice
 - Reed beds
 - Marginal aquatics.
- Amenity grass within the narrow swales through the **CWA** will be kept short to 40mm high (but regularly throughout the year) to ensure that the SuDS function correctly and convey water.

Species-rich grass elsewhere within the **CWA** will be left to grow long to encourage grasses to flower for interest and to enhance biodiversity. It is intended that the long grass areas will only be cut once a year following establishment. Refer to the notes relating to Species-Rich grass - "Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower."

Vegetation within the **Phase 5** wide swales will also include Species-rich grass, left to grow long.

Implementation programme

Proposed vegetation within the **CWA** and **Phase 5** shall be implemented during the first planting season after the hard landscape has been constructed to prevent damage to the new vegetation and to avoid compaction of soils. Avoid planting if the ground is waterlogged or if the ground is frozen.

Climatic conditions need to be observed with no planting/maintenance to be carried out in extremes of temperature <3°C or > 24°C (without suitable provision for irrigation). If the water supply is, or is likely to be, restricted by emergency legislation then planting/maintenance should be suspended.

Container grown plants can be planted at any time of the year subject to weather conditions.

Brief maintenance objectives will include regular planting checks and maintenance to ensure that the planting is establishing, and the SuDS elements are consistent with the original design intentions. This will involve continued / ongoing routine operations throughout the year, for which a detailed maintenance schedule is to be followed.

Regular maintenance and monitoring inspections of rain gardens should be undertaken to maintain SuDS performance and balance. Management and maintenance commitments would be more intense during the in initial establishment period, 1-2 years after planting. This would involve:

- Watering (as necessary)
- Weed control
- Pest and disease control
- Pruning
- Checking and cleaning of inlets and outlets
- Mulching (not bark mulch), and
- Litter picking.

Filter media

The filter medium should be sufficiently permeable to allow water to pass

through it, so that the surface of the retention area does not become waterlogged. It also needs to contain sufficient organic material and plant nutrients to support the proposed vegetation.

Filter media should be correctly specified. Any specification should take into account site specific requirements and constraints. The specification parameters should be clearly stated, so that in the event that a supplier ceases trading the filter material can still be replaced on a like for like basis.

Incorrect specification can cause reduced hydraulic conductivity through over compaction or structural collapse, leading to reduction in treatment capacity and surface ponding, loss of vegetation etc. The filter medium should be correctly installed with an appropriate level of compaction during installation to prevent migration of fine particles.

A filter medium that is placed uncompactd will initially show a very High hydraulic conductivity which will then rapidly decrease. So it is essential that testing of hydraulic conductivity be carried out on the compacted filter medium before installation.

A typical specification for the filter media:

day and silt (< 0.063 mm) < 5%

fine sand (0.063-0.2 mm) <20%

medium sand (0.2-0.6 mm) 35% to 65%

coarse sand (0.6-2.0 mm) 50% to 60%

fine gravel (2.0-6.0 mm) <10%

The filter medium should be well graded, and the composition should contain limited particle size range.

Organic matter content

Organic matter content should be 3-5% (w/w).

pH should be 5.5-8.5 (1:2.5 soil/water extract).

Electrical conductivity (salinity)

Electrical conductivity (EC) should be < 3300 μ S/cm (1:2.5 soil/CaSO4 extract)

Major plant nutrients

Total nitrogen should be 0.10-0.30%

Extractable phosphorus should be 16-100 mg/l

Extractable potassium should be 120-900 mg/l
(Methods of analysis in accordance with BS 3882:2015, unless otherwise stated)

Outline implementation specification

Ground preparation: Protect retained trees/areas of retained soil where structural landscaping is proposed in accordance with an approved Arboricultural Method Statement and Tree Protection Plan. Tree protection fencing shall be erected as noted within an Arboricultural Method Statement and Tree Protection Plan. The fence is to be maintained for the duration of the works. Protection of existing trees against damage to be in accordance with the BS 5837:2012 - Trees in relation to design, demolition and construction - Recommendations. Protective fence to be approved by the LPA. Any excavations shall be in accordance with BS 8000 part 11:1989.

Landscape planting areas to have a minimum depth of soil of 500mm and grass areas will have 300mm.
Loosen formation level with angle iron /ripper, driven 450mm deep at 1m centres, when ground conditions are dry.

Imported Subsoil. Where necessary, supply approved imported subsoil to BS 8601:2013 Specification for subsoil and requirements for use - Multipurpose subsoil to make up any deficiency in on-site subsoil.

- 200mm for planting areas
- 200mm for grass areas

Imported topsoil. Where necessary, supply approved imported topsoil to BS 3882:2015 Specification for topsoil - Multipurpose topsoil to make up for any deficiency in on-site topsoil.

- Spread and level to depth of:
- 300mm for planting areas
- 100mm for grass areas

Backfilling: Backfill tree pits with 100/300mm depth subsoil and 400mm topsoil including Melcourt Topgrow peat free planting compost or similar approved at a rate of 0.125m³/pit.

Backfill shrub pits with topsoil including Melcourt Topgrow peat free planting compost or similar approved at a rate of 1.0m³/20m².

Cultivation: Do not cultivate tree and shrub planting soils, only cultivate prior to planting if the soil is compacted (for example due due site/construction activities). For grass seeding areas, cultivate topsoil to a loose friable tillth suitable for grass seeding. Collect and remove from site all non-wooded rubble and other deleterious material over 30mm in any dimension.

Species-rich grass: refer to the adjacent notes.

Amenity grass areas: Supply and spread pre-seeding NPK, fertiliser (10:15:10) at a rate of 30g/m²

Grass areas to be sown at a rate of 35g/m² with a suitable grass seed mix such as Germinat A19. Initial grass cutting and edge trimming down to 40mm.

Planting Areas:

Excavation: Any excavations in order to win soil for re-use as part of landscaping must be undertaken in accordance with BS 3882:2015, BS 8601:2013 and the 2009 DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

Trees: excavate a few centimeters shallower than root-ball and twice its width with sloping, scarified sides. Root balls of trees shall be set on a 150mm depth of horticultural grade sharp sand. Semi-Mature trees shall be set on a 400-450mm depth of horticultural grade sharp sand. Shrubs excavate 3.0 x 3.0 x 3.00mm depth.

Plant specifications: Plant specification to be in accordance with the HTA National Plant Specification 03/202.

Tree planting to be in accordance with BS 8545:2014 - Trees from nursery to independence in the landscape recommendations.

Fertiliser: Supply and plant, incorporating slow release fertiliser NPK-4:19:10 ENMAg or similar approved at the following rates:

- Feathered Trees: 100g / tree pit
- Standard/Selected Standard Trees: 100g / tree pit
- Heavy/Extra Heavy Standard Trees: 130g / tree pit
- Shrubs: 70g / m²

Trees stakes: Provide and fix tree/shrub shelters to the native planting dimensions:

- Feathered Trees: overall length 1250mm; height above ground: 600mm
- Standard/Selected Standard Trees: overall length 1500; height above ground: 750mm
- Heavy/Extra Heavy Standard Trees: overall length 1500; height above ground: 750mm

Trees shelters: Provide and fix tree/shrub shelters to the native planting plants, such as Tubex Easywrap Trees Shelter Guard by Green Tech, or similar and approved.

Provide and spread evenly over all planting areas an organic graded bark flakes or similar approved bark mulch to a depth of 50mm.

General Notes:

Substitutions, if made, should be similar in size, form and water demand. Plants shall be arranged to avoid straight lines and geometric patterns.

Maintenance

All landscape areas to be maintained in accordance with BS 7370 Part 3:1991 and Part 4:1993; including weed control, and adjustment to tree stakes and ties.

Soft landscape areas to be maintained in accordance with **B.S. 7370 Part 3:1991** and Part 4:1993. The maintenance of trees should be in accordance with **BS 3998:2010** and **BS 8545:2014**. Maintenance operations to successfully establish plants shall be carried out for the first 5 years after planting.

Maintenance operations for successful plant establishment shall include watering, weed control/fertiliser application, pest and disease control; pruning, and litter picking. Watering for trees should follow an irrigation plan in accordance with BS 8545:2014 and must be in anticipation of drought.

Tree pruning should be in the winter months or summer (July-August). Cherries must be pruned only in the summer months after flowering.

The replacement of failed trees should occur once reasons for failure have been identified and amendments to the specification are made as necessary. Shrubs which die, are removed or become seriously damaged shall be replaced in the next planting season with others of similar size and species, to be agreed in writing by the Local Planning Authority. For all new landscape areas, the following maintenance programme shall be undertaken:

- **Inspection:** January - December: Replace dead plants when necessary.
- **Watering:** When necessary in accordance with an irrigation plan.
- **Pest and disease control:** January.
- **Litter removal:** January - December
- **Weed control:** February - May/ July and September.
- **Prune:** Winter months or summer.

- **Fork over planting beds:** March.
- **Cut grass and trim edges:** March - October.
- **Apply fertiliser:** April.
- **Lightly fork over planting beds:** September.
- **Rake / scarify grass:** September.
- **Mulch:** Mid to late spring.

Watering: Water trees in accordance with an irrigation plan as per BS 8545:2014. Watering shrubs shall be carried out to maintain vigorous plant growth. Water shall soak into the ground; it is not sufficient to dampen the surface. Water must be applied slowly to avoid damage to plants.

Weed control: Hand weed to remove all weeds and their roots using a hoe, trowel or fork. Apply a herbicide to kill re-growth when required.

Fertiliser: Applications of fertiliser to be carried out early in the growing season. Ensure correct fertiliser application. Inspect once a month and after very heavy winds. Adjust ties if necessary to conform to stem growth or to prevent chafing.

Pruning: At the appropriate season for the species, pruning to be carried out to remove all damaged diseased or dead wood. Prune shrubs to ensure the plant is kept well balanced and in good shape. For trees, pruning shall be in accordance with **BS 3998:2010**.

Pest and disease control: To be carried out if necessary and in accordance with best practice.

Litter removal: Collect and remove all extraneous rubbish.

Fork over planting beds: Pick up trodden or compacted soil surfaces to aerate the soil without damaging the plants.

Mulching: Mulching to be topped up annually over the duration of the agreed maintenance period. At the end of the maintenance period, undertake a final mulch. Ensure that the soil is thoroughly moistened prior to mulching, applying water where necessary. Planting beds and trees: re-mulch to a minimum depth of 50 mm. Refer also to mulching SuDS below.

Mowing: Amenity grass areas shall be managed to a height of 40mm. Species rich grass areas to be mowed as advised by the supplier (refer to the below).

Raking/Scarifying: Relieve thatched conditions and remove dead grass in the autumn over all grassed areas.

Spiking (Aeration): Aerate to increase water, nutrient and oxygen movement into the soil.

General: If grass surface is disturbed by over use, restore by firming or lifting with a fork

Any newly planted trees, plants or hedgerows, which within a period of 5 years from the completion of the development, die, are removed, become seriously damaged or diseased, or in the opinion of the Local Planning Authority otherwise defective shall be replaced. Replacement planting shall take place during the first available planting season.

Mulch layer

The use of an organic mulch should generally be avoided for SuDS. In the case of infiltration systems (with no overflow), a mulch may be used, but there is still a risk of excessive movement of material during high flows. A gravel mulch may be valuable where there is a need to protect the soil from erosion or decrease the drop to the water storage zone (for safety reasons), while still maintaining an acceptable ponding volume.

Species-rich grass (long grass areas)

Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut': cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow or graze the re-growth through to late autumn/winter to c 50mm and again in spring if needed.



Suggested Sowing Rates:
40kg/ha 16kg/acre 4g/m2

Description
EM8 contains species suitable for seasonally wet soils and is based on the vegetation of traditional floodplain and water meadows. Soils in wet meadows may flood for short periods in winter, but are usually well drained in summer.

Ground Preparation
Endeavour to select ground that is not highly fertile and does not have a problem with perennial weeds. Good preparation is essential to success so aim to control weeds and produce a good quality seed bed before sowing.



North Littlehampton: Central Wetland Area and Phase 5

Specifications including SuDS

LA.10

TC22029_A088461-LA1-LA10[F].dwg 04.11.2024



Floor 7, Brunel House, 2 Fitzalan Road, Cardiff, CF24 0EB
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NOTES:

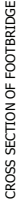
- **SFP4LITTLE** CWA 10/20 series - Levels & Drainage Drawing
- **SEDM4LITTLE** CWA 10/20 series - Construction Template



SECTION 8-8



SECTION 2-



CROSS SECTION OF FOOTBRIDGE



SECTION 9—9



SECTION 1-1



ing on a rock



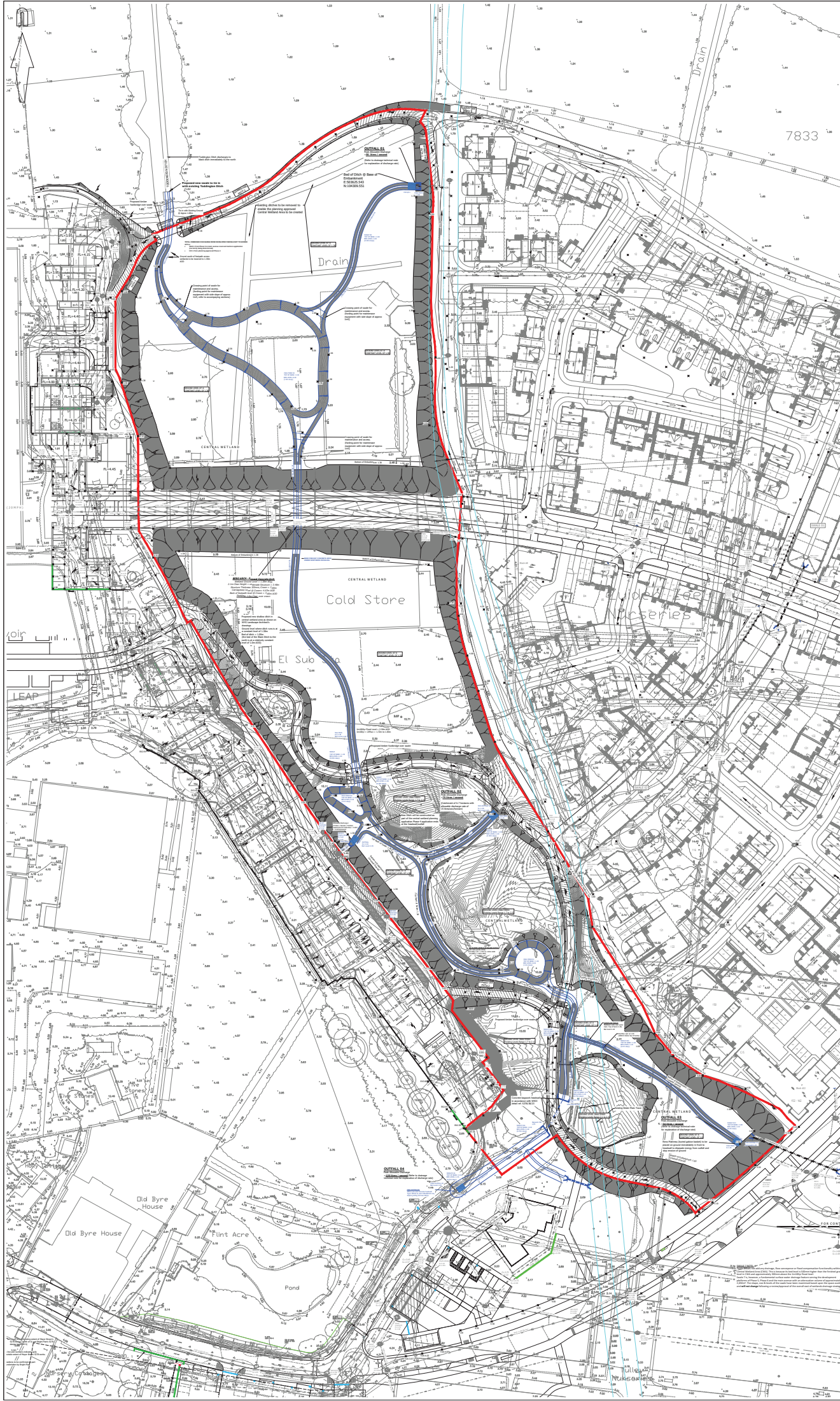
FOR APPROVAL	01/03/2022
P3	Sections 2-2 to 8-6 amended. Typical extrados sections added (3P)
P2	Section 9-9 added through Scale 01 (1C)
P1	Initial issue (0C)



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client	PERSIMMON HOWES THAMES VALLEY		
project	NORTH LITTLE HAMPTON EAST OF WETLANDS MAIN AVENUE & NORTHERN CROSSING		
scale	1:50	drawn by	SF
date	JULY 2021	IC	checked by
file	MBC03.DWG		
100			

PROPOSED CENTRAL WETLAND SWALES
CROSS SECTIONS



AO ORIGINAL

KEY

PROPOSED SURFACE WATER SEWER AND MANHOLE

PROPOSED SURFACE WATER CATCHPIT

PROPOSED FOUL WATER SEWER AND MANHOLE

PROPOSED FOUL WATER CHAMBER

PROPOSED SURFACE WATER POND

PROPOSED SURFACE WATER HEADWALL AND CULVERT

PROPOSED SURFACE WATER SWALE

PROPOSED CONTOURS

PROPOSED SPOT LEVEL

PROPOSED EMBANKMENT

EXISTING WATER MAIN AND EASEMENT

RED LINE BOUNDARY

NOTES

1. This drawing is not to be scaled.

2. Based on topographic survey by WVG drawing numbered GGL/AD4025/LAY/01.

3. Grading plan layout taken from WVG drawing titled X-GRADING.

4. This drawing is to be read in conjunction with all relevant engineering and landscaping drawings. Any discrepancies are to be reported to the engineer immediately for clarification.

5. All on-site civil and drainage works constructed in accordance with the Water Severn Limited Specification, Details and the schedules.

6. Proprietary items are to be constructed in accordance with manufacturers recommendations / requirements.

7. All drainage works shall be carried out in accordance with the requirements of the Local Authority, the Environment Agency and in conjunction with all relevant British Standards, Codes of Practice and 'Sewers for Adoption' 7th Edition and any amendments as appropriate.

8. Invert levels and positions of existing drains / chambers / sewers where new connections are to be made must be checked and confirmed to the engineer prior to the commencement of any works.

9. Any part of the existing drainage system to be retained as part of the new scheme shall be cleaned and inspected. Any structural defects shall be repaired using appropriate and approved means.

10. All new manholes and catchpits are to be constructed to suit unless noted otherwise. Invert level shown is outlet pipe.

11. All drainage shall comply with the typical details and the requirements of BS EN 752 and Part 4 of the Building Regulations.

12. All precast concrete units used in the drainage works shall be manufactured using sulphate resisting cement.

13. The diameters and gradients of the main surface water and foul water sewer drains are identified in the typical.

14. Cover levels are to be adjusted locally to suit finished ground levels.

15. HEALTH AND SAFETY: The works shall be carried out by competent and experienced contractors who are members of a recognised national organisation. Operations shall have received full and appropriate training for the operations they are to undertake. All work shall be carried out in accordance with all pertinent Health and Safety Regulations.

FOR CONSTRUCTION

C2

Revised following redesign of footpaths (TC)

SF

25/04/24

C3

Sewer added, pond drainage updated. Issued for "Construction" (TC)

SF

04/08/22

F7

Clearing updated to include new footpaths (Issued)

TC

08/02/22

F8

Clearing updated following K16 concrete removed on 10/01/22 and removed from WVG dated 09/02/22 (TC)

TC

25/02/22

F9

Clearing added to show results 7 as part of the CDIA application. Red line boundary, notes and key updated (TC)

TC

28/02/22

F5

Existing Water Main alignment amended (TC)

SF

25/01/22

F4

Red line boundary updated. Project Name in title block amended. CDIA Scope EIC and existing Water Main added to existing (TC)

TC

19/02/22

F3

Spot Levels updated on CDIA Pond 03 (TC)

SF

11/01/21

F2

Revised drawing following new layout CDIA drainage line added to Tadlington CDIA, South with all relevant existing material. General updates (TC)

SF

25/01/21

F1

Detail Issue (TC)

SF

09/01/21

rev.

amendment

checked

date

M3

Major Works

Person

PERSONS HOMES THAMES VALLEY

Project

NORTH LITTLEHAMPTON
CENTRAL WETLAND AND NORTHERN CROSSING

Scale

1:500

Drawn by

TC

Checked by

SF

Date

JULY 2021

Issued by

20.DWG

Proposed Levels and Drainage

Person

Major Works Limited

Address

Unit 10, Central Road, Woking, Surrey GU24 0BA

Telephone

01483 754147

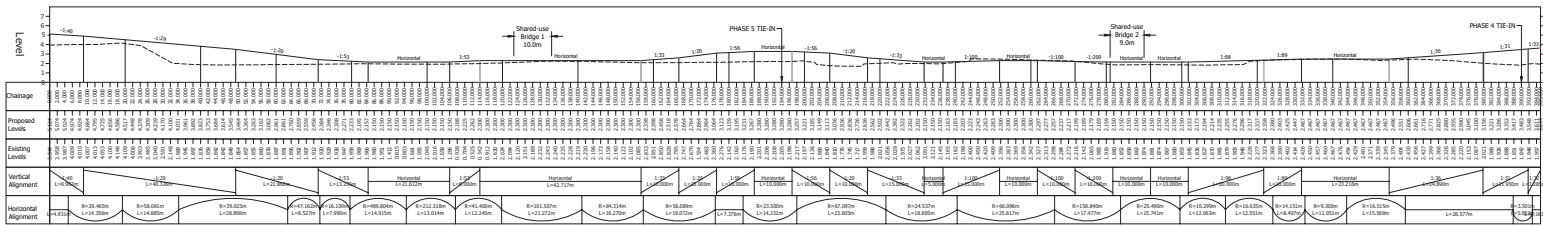
Website

www.majorworks.co.uk

Drawing number

SF/PHLITTLE-CWA.10/20

[illegible]





AO ORIGINAL

KEY

EXISTING KERB LINE

PROPOSED KERB/EDGING LINE

TREE ROOT PROTECTION AREA

EARTHWORKS IN CUT

EARTHWORKS IN FILL

NEUTRAL

RED LINE BOUNDARY

NOTES:

1. This drawing is not to be scaled.

2. This drawing is to be read in conjunction with the following Mayer Brown drawing references:

- SF/PH/LITTLE-CWA.10/20 - Proposed Surface and Foul Water Drainage General Arrangement
- SF/PH/LITTLE-CWA.10/20 - Proposed Construction Treatments
- SF/PH/LITTLE-CWA.10/21 - Bulk Earthworks - Sections Through Central Wetland

3. The drawing shows the areas of Cut (Red Contours) and areas of Fill (Green Contours).

4. HEALTH AND SAFETY: The works shall be carried out by specialist competent and experienced contractors who are members of a recognised national organisation. Operations shall have received full and appropriate training for the operations they are to undertake. All work shall be carried out in accordance with all pertinent Health and Safety Regulations.

5. The cut/fill exercise has been carried out using Civil 3D software, which is a civil engineering software package that can be used to determine bulk earthworks volumes between two separate overlapping 3D surfaces. The two overlapping 3D surfaces are as follows:

- 3D surface from Topographic Survey undertaken by Subvision Survey in March 2022.
- 3D surface for proposed finished surface.

FOR CONSTRUCTION

C1 Details added, amend details submitted, issued for "Construction" (1/2)

C2 Revision submitted and details approved, for approval, Project title and location of Section 5.5 provided (1/2)

C3 Detail issue (1/2)

SP 04/02/2022

SP 14/01/2022

SP 09/01/2021

rev.

amendment

checked

date

m3

Mayer Brown

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client

PERSONS HOMES THAMES VALLEY

project

NORTH LITTLEHAMPTON
CENTRAL WETLAND AND NORTHERN CROSSING

scale

1:500

project

IC

revision

SF

date

JULY 2021

file no.

50.DWG

work

BULK EARTHWORKS - ISORACHYTE HEIGHTS

drawn by

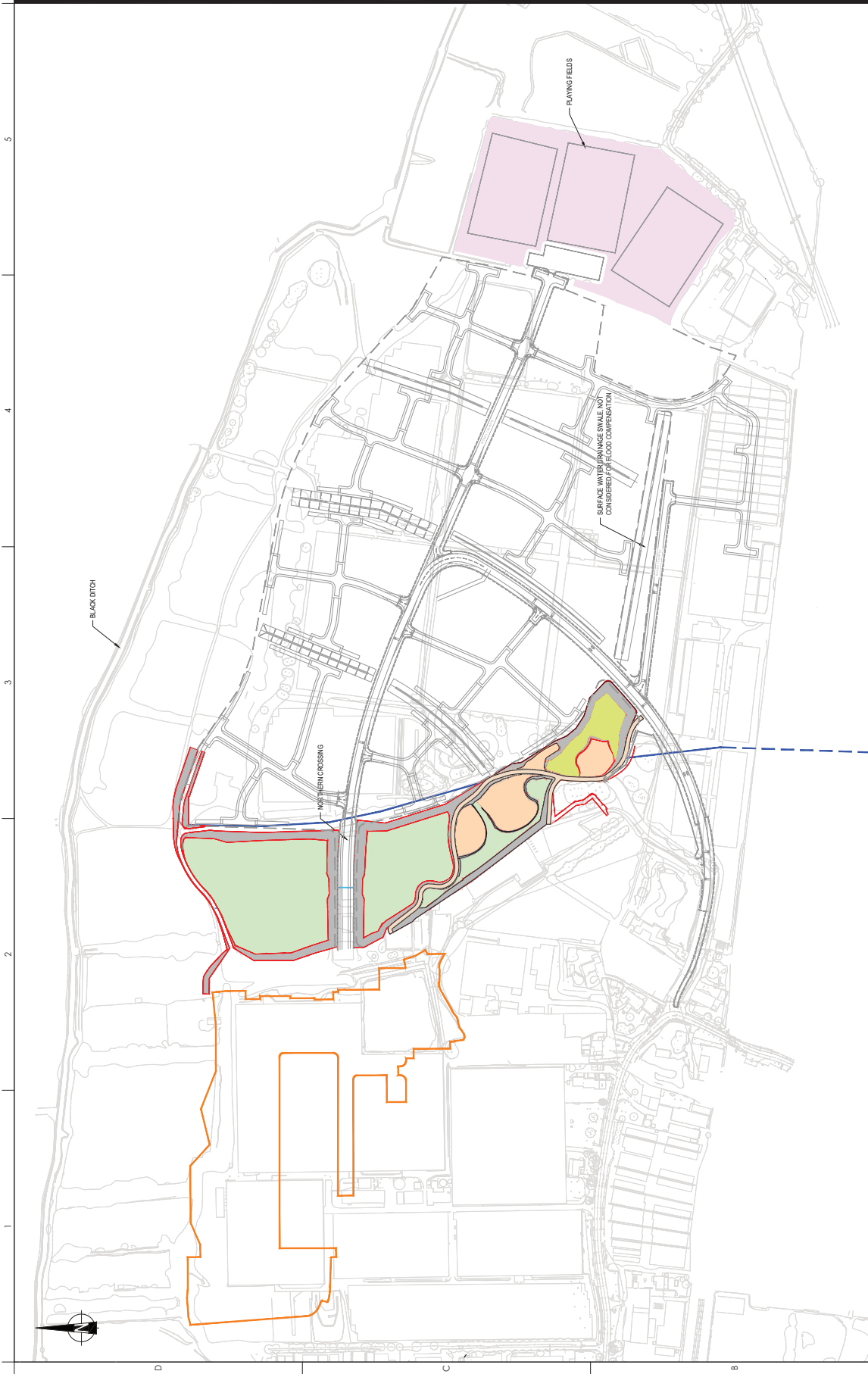
Mayer Brown Limited (please)

checked by

CI

drawing number

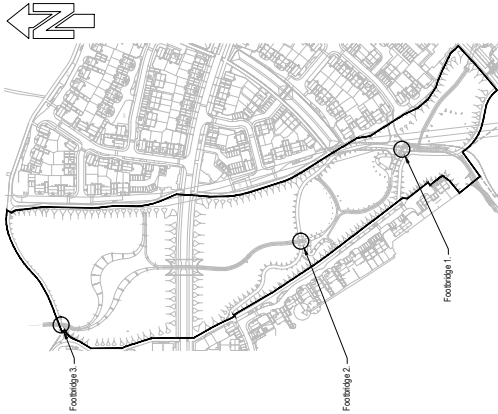
SF/PH/LITTLE-CWA.10/50

[illegible]

1. BASED ON MASTER PLAN INFORMATION PROVIDED BY PEISSON DRAWINGS No. 516, 100 DATED APRIL 2017.
2. CENTRAL WETLAND AREA, GROUND LEVEL IS SAME BASED ON 2016 FLOOD LEVELS IS TAKEN FROM PRODUCT 4 DATA PROVIDED BY THE ENVIRONMENT AGENCY REF. 3350/43 DATED 11.04.2016.
3. GROUND LEVELS IN WETLAND CHIN TO SLOPE AT 1: GRADIENT NO STEEPER THAN 1:200 FROM TOP OF EMBANKMENT TO CENTRAL DRAINAGE DITCH.
4. PROPOSED FOOTPATH LAYOUT PROVIDED BY WHITE YOUNG GREEN DRAWINGS No. 408/461 ACW/16/20 DATED JULY 2016.
5. PROPOSED ROAD LAYOUT PROVIDED BY MATYER BROWN DRAWING No. MBS/18/04/16 DATED JULY 2016.
6. SEE PBA DRAWINGS 3594/1/597 030 AND 3594/1/597/010 FOR DETAILS OF NORTHERN AND SOUTHERN CHIN CROSSINGS.
7. SEE INWER BROWN DRAWINGS FOR DETAILS OF PLATFORM LEVELS AND ON-PLATFORM DRAINAGE.
8. SEE INWER DRAWINGS FOR LANDSCAPING DETAILS THROUGH CHIN.

- PROPOSED TOP OF GRADING
- PROPOSED 1:3 SLOPE
- LOWER CMA COMPENSATION PLATFORM (AVERAGE LEVEL: 1.3m AOD)
- UPPER CMA COMPENSATION PLATFORM (AVERAGE LEVEL: 1.60m AOD)
- TREE PROTECTION PLATFORM
- PLANTING FIELDS - TO BE SET AT A OF 154m AOD AND GRADED TO EXISTING FOOTPATHS THROUGH CMA
- INDICATIVE ALIGNMENT OF CIVIL DRAINAGE DITCH
- PREVIOUSLY CONSENTED BOUNDARY (PARCELS C1, C2, B2 AND B4)
- SUBJECT TO AGREEMENT OF SOUTHERN WATERS WATER MAIN

- This drawing is to be read in conjunction with Eastwood Consulting Engineers drawing with the project title "and all relevant documents" in drawing.
- Reinforced concrete to be C28/35 designed in accordance with BS 800.
- Foundations have been designed assuming a formation in undisturbed natural ground with a safe bearing capacity of 350kN/m².
- Top of foundations 300mm below proposed ground level unless noted otherwise.
- Foundations are to have a minimum of 50mm thick concrete blinding. Blinding may be omitted if bottom cover is increased to 12mm.
- Normal cover to reinforcement to be:-
Top cover = 50mm
Side cover = 50mm
Bottom cover = 50mm
(Where cast against an earth face side cover = 75mm and beam width increased accordingly).
- Reinforcement to be high yield steel to BS 8666.
- Minimum lap lengths:
H10 - 400mm
B365 - 300mm



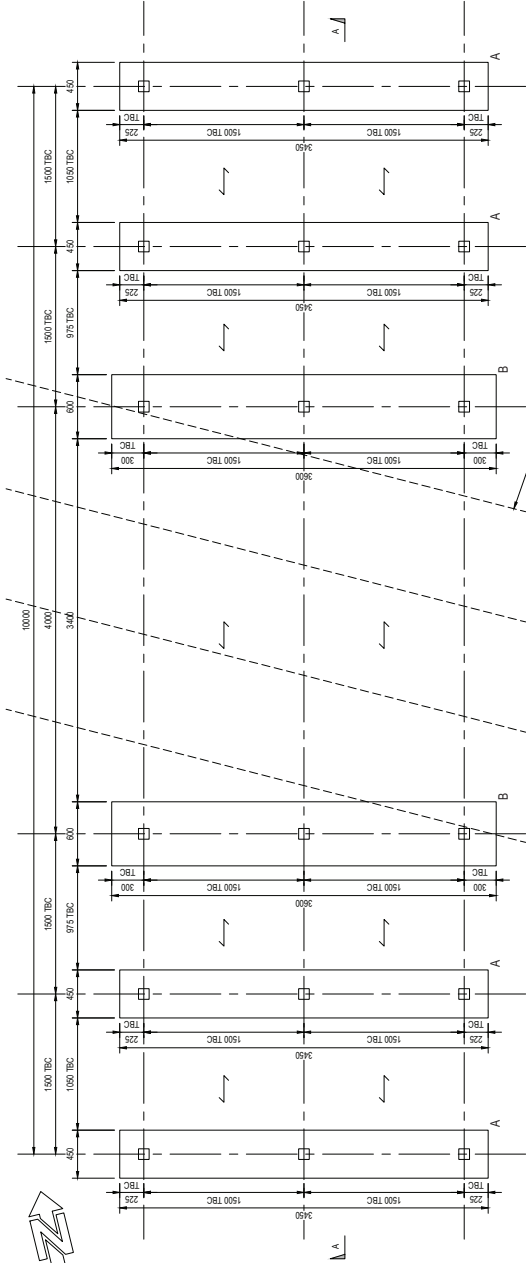
LOCATION PLAN
(SCALE 1:250)

NOTE:
FOOTBRIDGE DESIGNER TO CONFIRM
ARRANGEMENT SHOWN IS ACHIEVABLE

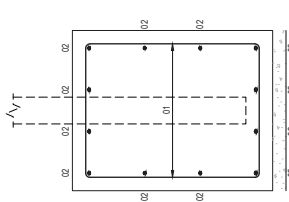
KEY
Direction span of composite footbridge
Structure design by others

FOUNDATION SCHEDULE		
TYPE	SIZE (mm)	REINFORCEMENT*
A	2450 x 450 x 450 deep	1 layer B365 mesh top & bottom, 50 cover
B	3600 x 600 x 750 deep	See Typical Details

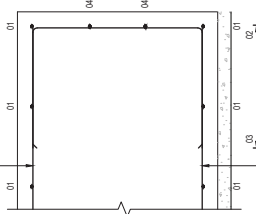
*Main bars to be orientated along the long edge of the foundations.



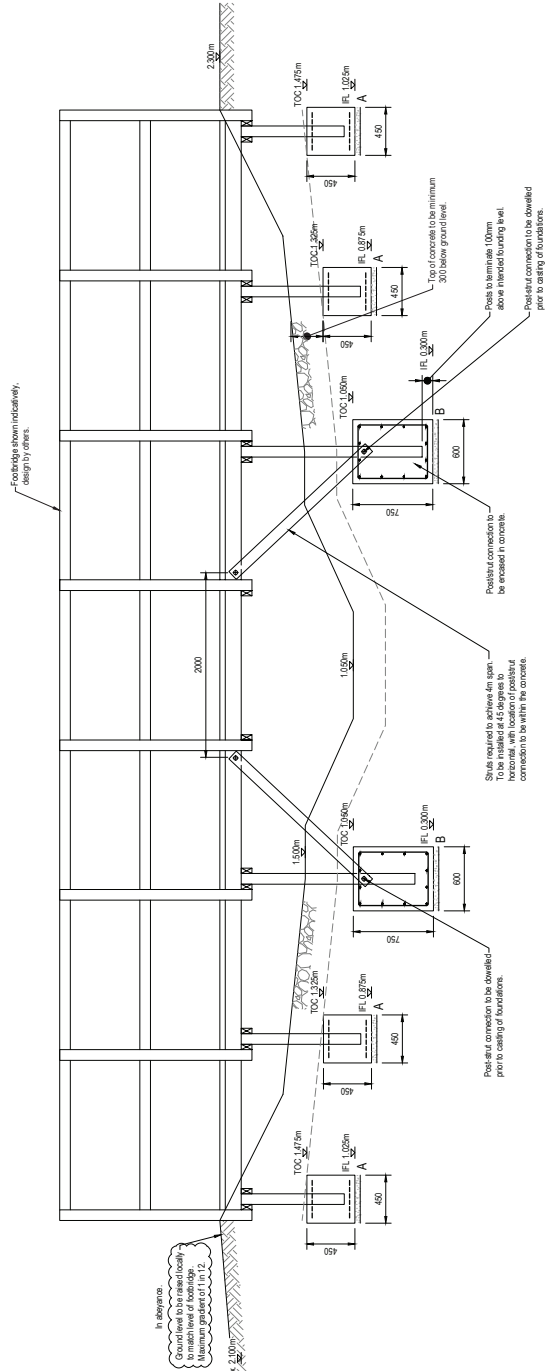
PLAN
(SCALE 1:25)



TYPICAL SECTION THROUGH
FOUNDATION TYPE B
(SCALE 1:30)



TYPICAL END ELEVATION ON
FOUNDATION TYPE B
(SCALE 1:30)



SECTION A - A
(SCALE 1:25)



EEC PROJECT NO: 1101/25
47631
SCALE: A1
1101/25
S0
Initial

47631 - ECE - XX - XX - DR - S - 0101 P01
Project: Designer: Date: Type: Note: Number

1. This drawing is to be read in conjunction with Eastwood Consulting Engineers drawing with the project title "and all relevant documents & drawings."

2. Reinforced concrete to be C28/35 designed in accordance with BS 8001.

3. Foundations have been designed assuming a formation in undisturbed natural ground with a safe bearing capacity of 350kN/m².

4. Top of foundations 300mm below proposed ground level unless noted otherwise.

5. Foundations are to have a minimum of 50mm thick concrete blinding. Blinding may be omitted if bottom cover is increased to 125mm.

6. Nominal cover to reinforcement to be:-
Top cover = 50mm
Side cover = 50mm
Bottom cover = 50mm
(Where cast against an earth face side cover = 75mm and beam width increased accordingly).

7. Reinforcement to be high yield steel to BS 8666.

8. Minimum lap lengths:
H10 - 400mm
B365 - 300mm
-
- LOCATION PLAN
(SCALE 1:2500)
- NOTE:
FOOTBRIDGE DESIGNER TO CONFIRM
ARRANGEMENT SHOWN IS ACHIEVABLE
- KEY
Direction spans of composite footbridge
Structural design by others
- | TYPE | SIZE (mm) | REINFORCEMENT* |
|------|-----------------------|--|
| A | 2450 x 450 x 450 deep | 1 layer B365 mesh top & bottom, 50 cover |
| B | 3600 x 600 x 750 deep | See Typical Details |
- *Main bars to be orientated along the long edge of the foundations.
- PLAN
(SCALE 1:250)
- Approximate extents of works.
- Footbridge shown indicatively,
design by others.
-
- SECTION A - A
(SCALE 1:250)
- TYPICAL SECTION THROUGH
FOUNDATION TYPE B
(SCALE 1:100)
-
- TYPICAL END ELEVATION ON
FOUNDATION TYPE B
(SCALE 1:100)
- PER FOUNDATION:
BM01 = 13 to 18 mms at 3000C-A-400, B-450
BM02 = 13 to 18 mms at 3000C-A-400, B-450
BM03 = 13 to 18 mms at 3000C-A-400, B-450
BM04 = 13 to 18 mms at 3000C-A-400, B-450
- Eastwood

CONSULTING ENGINEERS

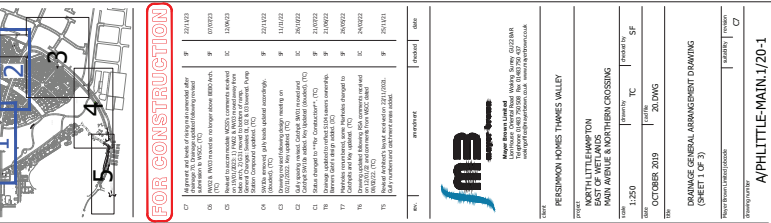
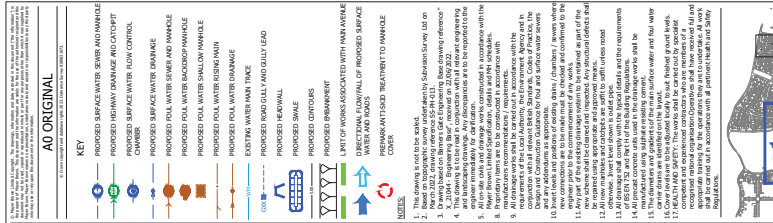
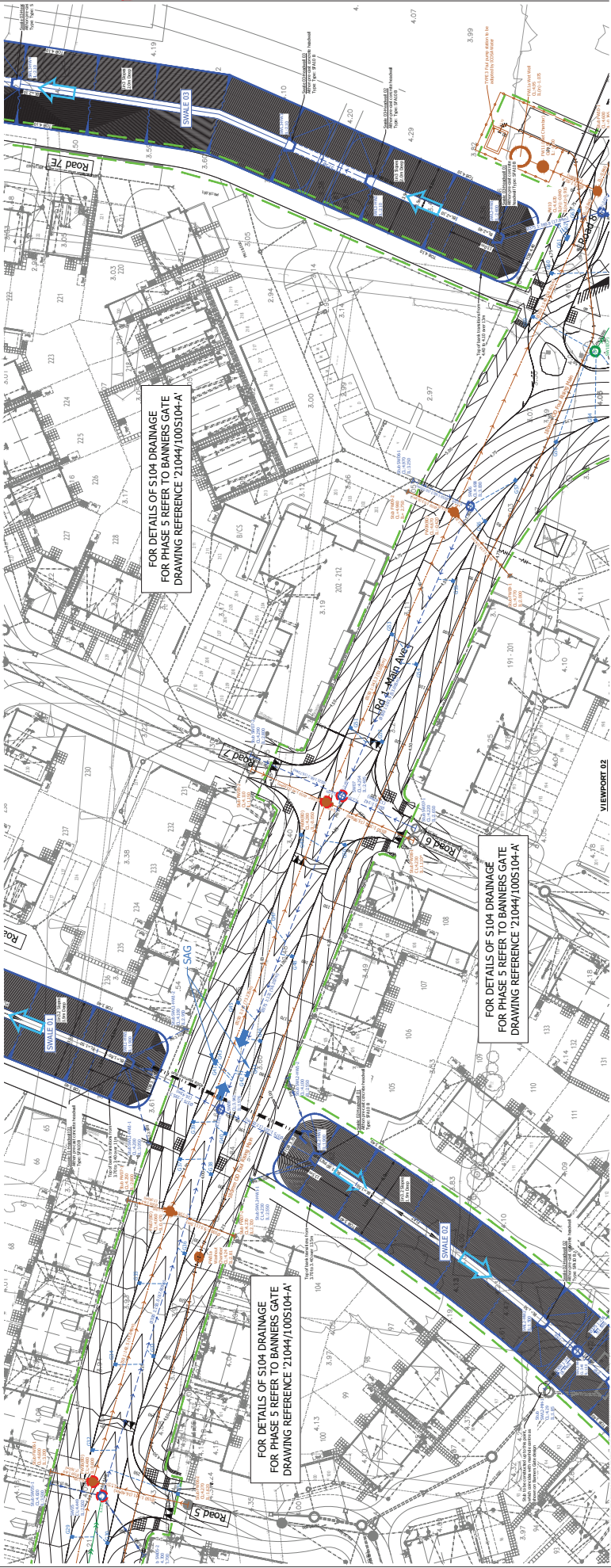
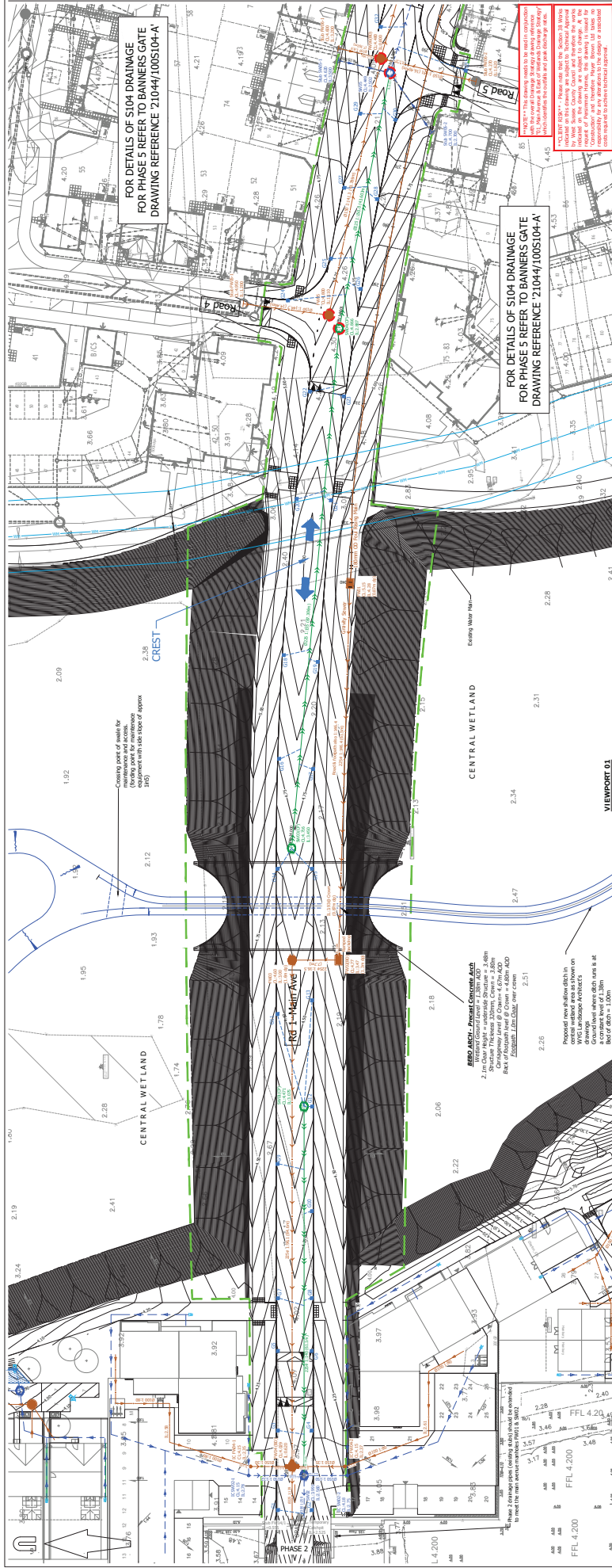
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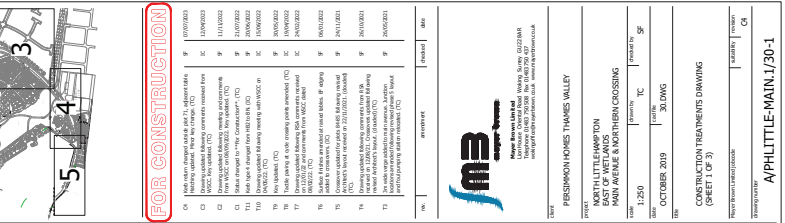
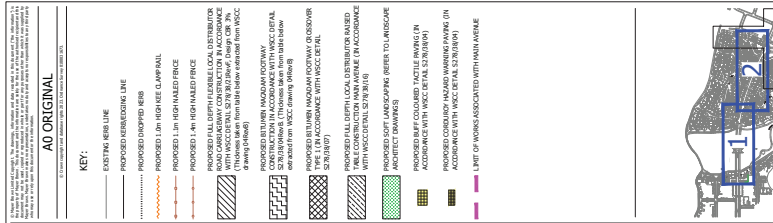
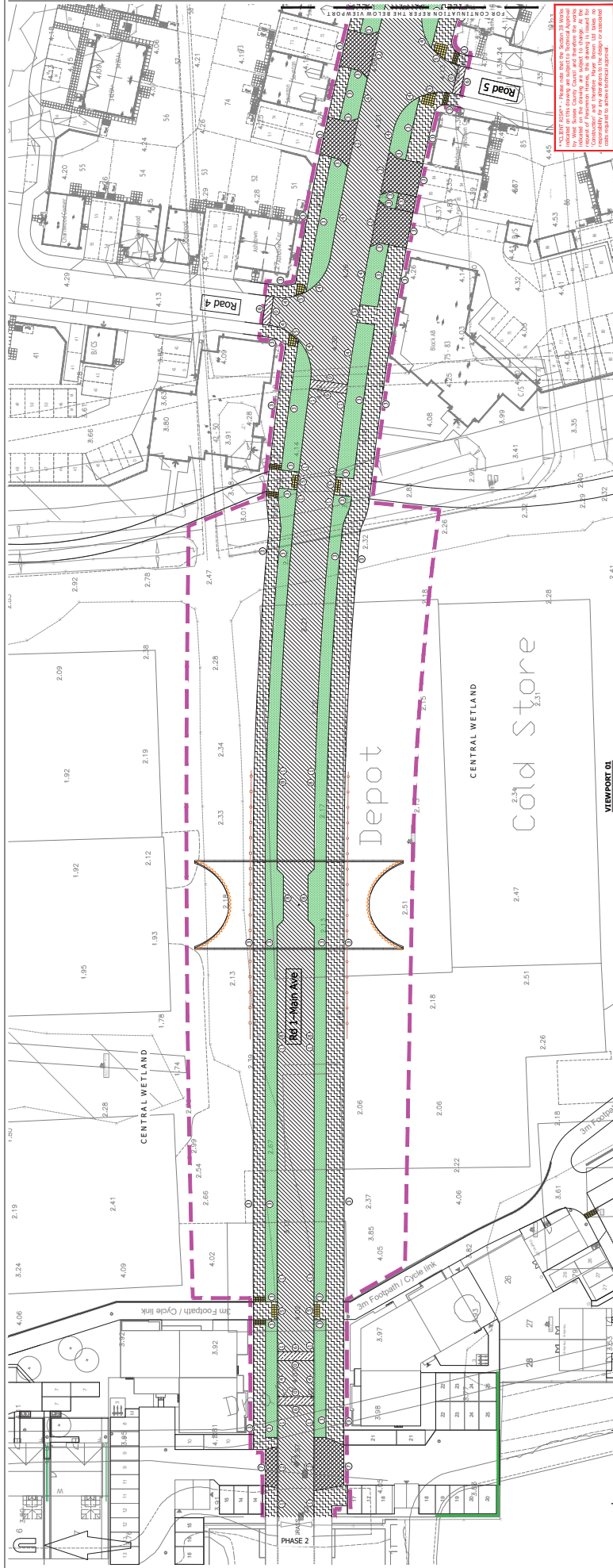
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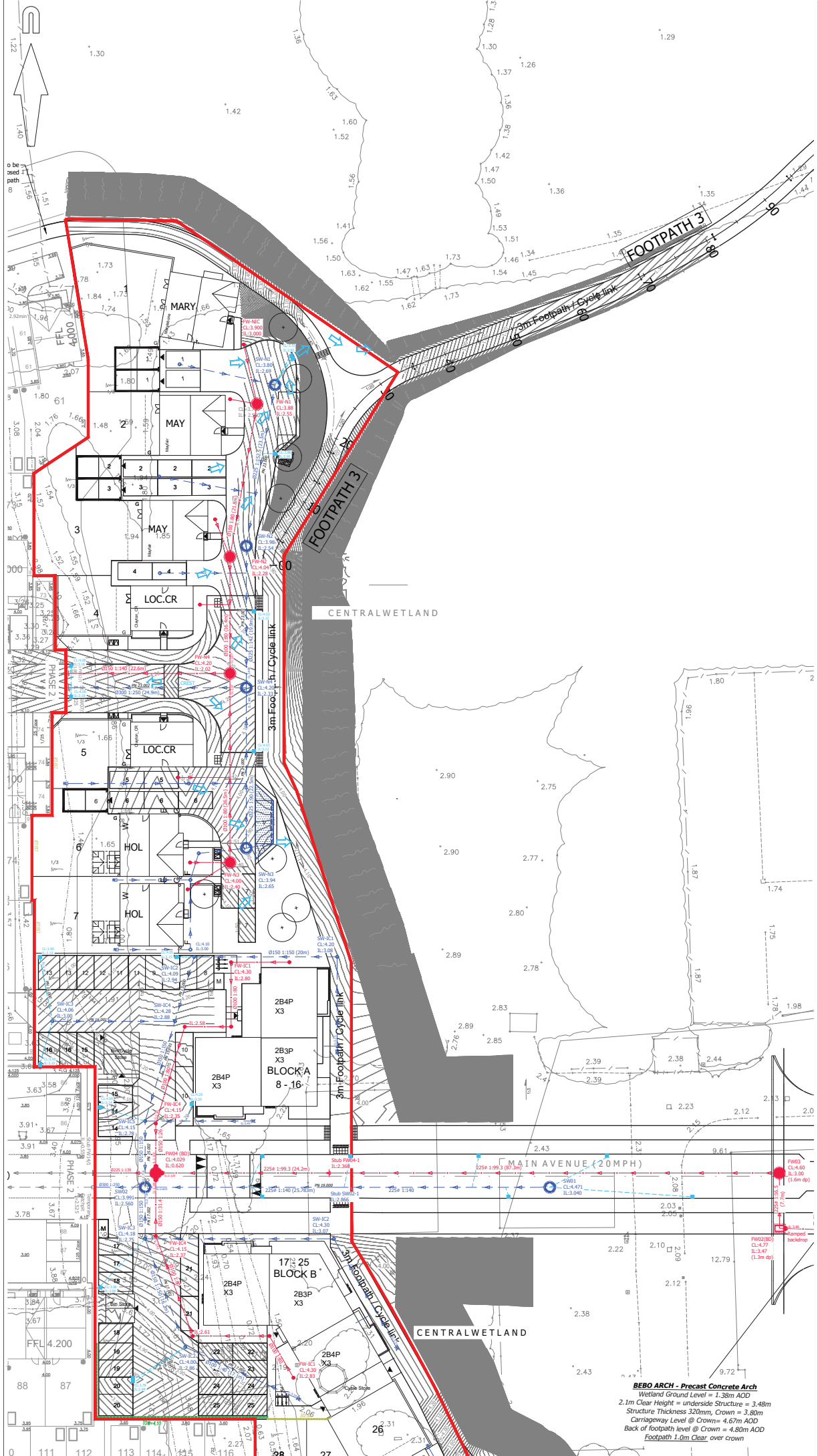
Swindon, SN1 3AU

T: 0114 235 6554

E: enquiries@eastwood.co.uk
- | REV | DESCRIPTION | DATE |
|-------|-------------|---------|
| 47631 | Initial | 11/1/25 |
| 47631 | Initial | 11/1/25 |
| 47631 | Initial | 11/1/25 |







A1 ORIGINAL

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DRAINAGE KEY:

- PROPOSED SURFACE WATER SEWER AND MANHOLE
- PROPOSED FOUL WATER SEWER AND MANHOLE
- PROPOSED FOUL WATER BACKDROP
- PROPOSED SURFACE WATER SEWER AND INSPECTION CHAMBER
- PROPOSED ROAD GULLY
- PROPOSED RODDING EYE
- PROPOSED SURFACE WATER OUTFALL
- PROPOSED ATTENUATION TANK
- PROPOSED PERMEABLE PAVING & FIN DRAIN
- EXCEEDENCE FLOW ARROWS
- PROPOSED CONTOURS
- PROPOSED FOUL RISING MAIN
- SITE BOUNDARY

LEVELS KEY:

- FL=1.45 PROPOSED FLOOR LEVEL
- 1/200 PROPOSED GRADIENT
- PROPOSED GRAVEL BOARD RETENTION
- PROPOSED RETAINING WALL

- NOTES:**
- Drawing based on Persimmon Homes Thames Valley Architect's 'Site Layout' drawing reference 545_PL_AP2_101, received on 15/04/2021.
 - Based on topographic survey by WYG drawing numbered GGL/A044029/LAY/01.

FOR INFORMATION
NOT FOR CONSTRUCTION

PI	Initial Issue: (TC)	SF	26/10/2021
rev.	amendment	checked	date

m3
mayer brown

Mayer Brown Limited
Lion House, Oriental Road, Woking, Surrey GU22 8AR
Telephone 01483 750 508 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
PERSIMMON HOMES THAMES VALLEY

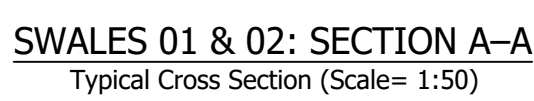
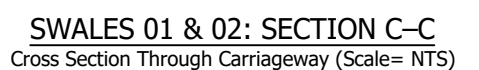
project
NORTH LITTLEHAMPTON
EAST OF WETLANDS
MAIN AVENUE & NORTHERN CROSSING

scale	1:250	drawn by	TC	checked by	SF
date	OCTOBER 2021	cad file	MBSK211026-1.DWG		
title	NORTHERN CROSSING DRAINAGE INTERFACE WITH PHASE 4 DRAINAGE				

Mayer Brown Limited jobcode suitability revision
P1

drawing number
MBSK211026-1

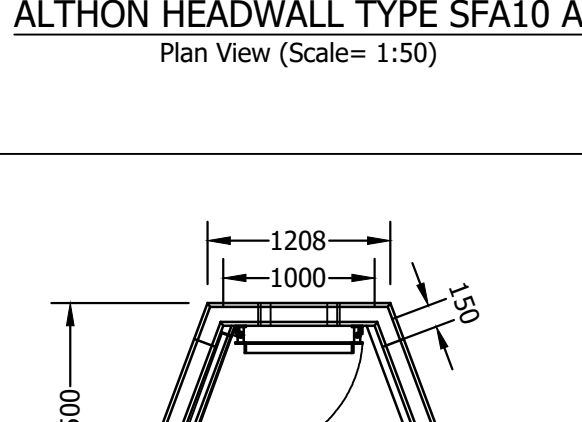
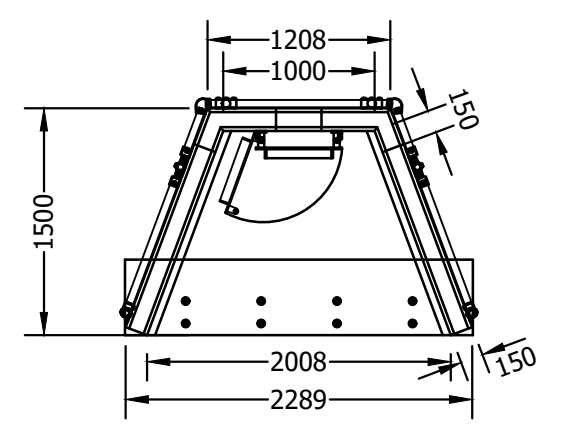
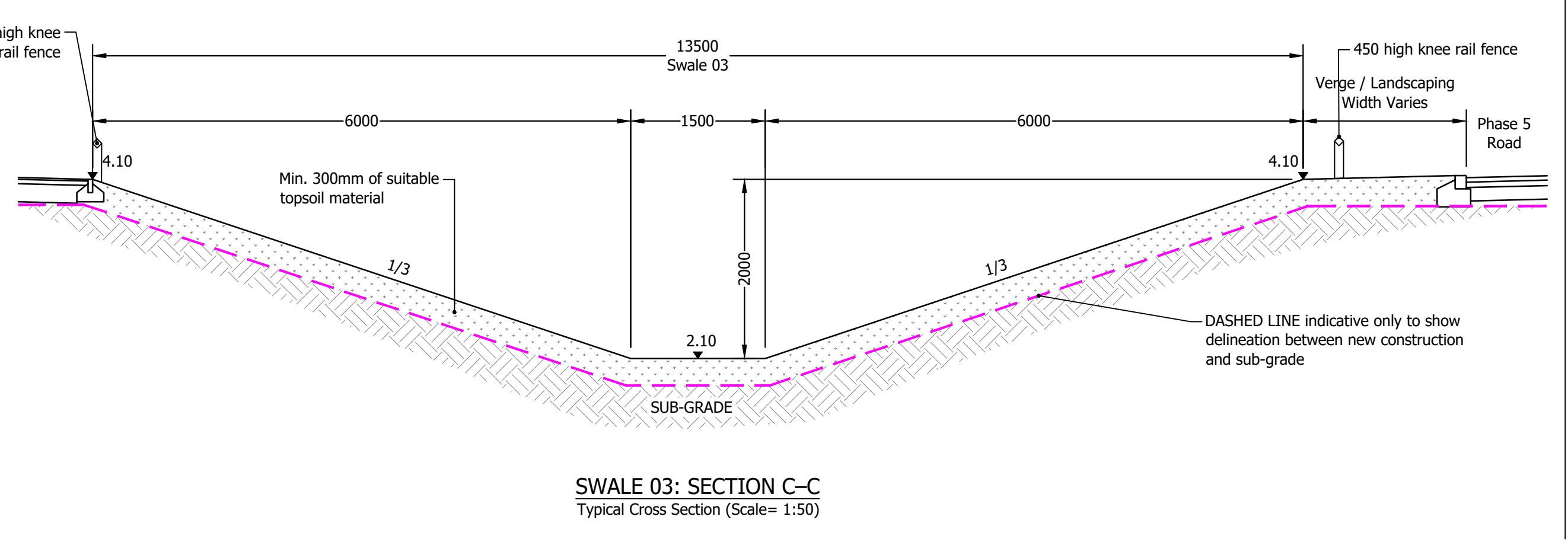
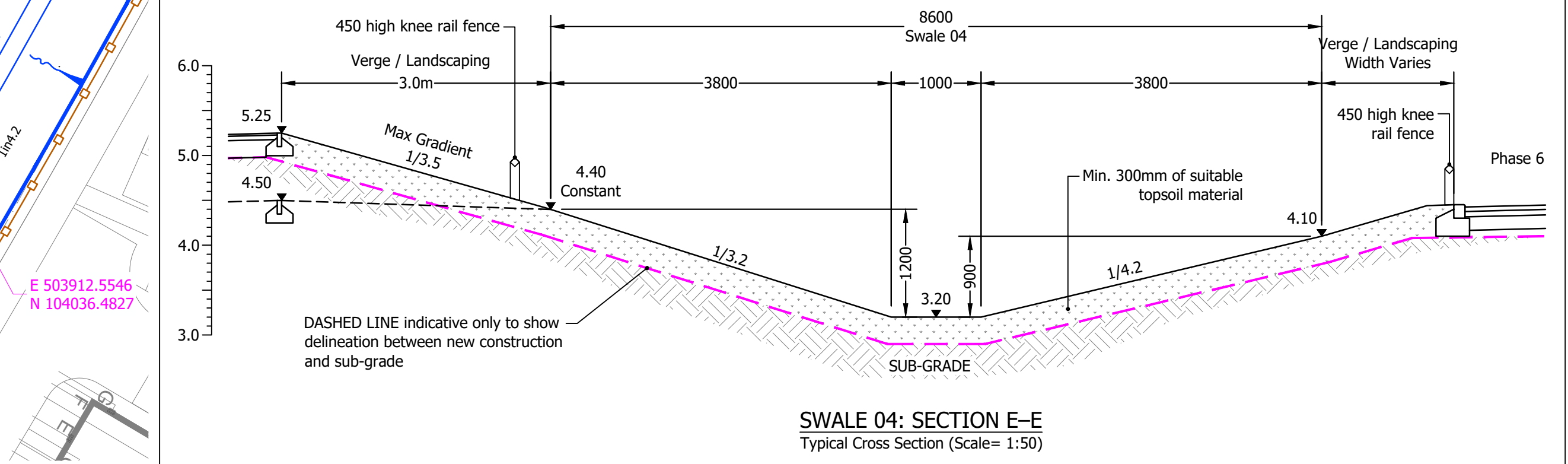
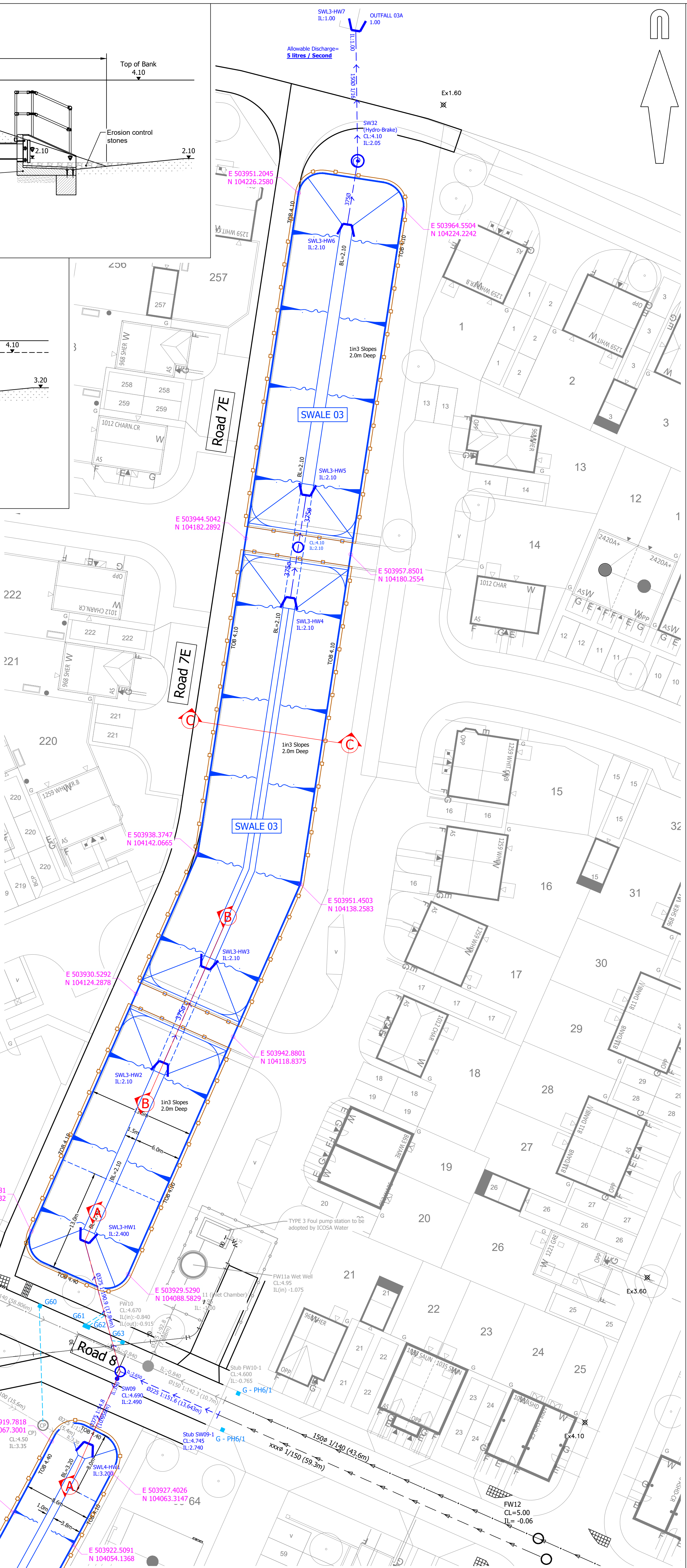
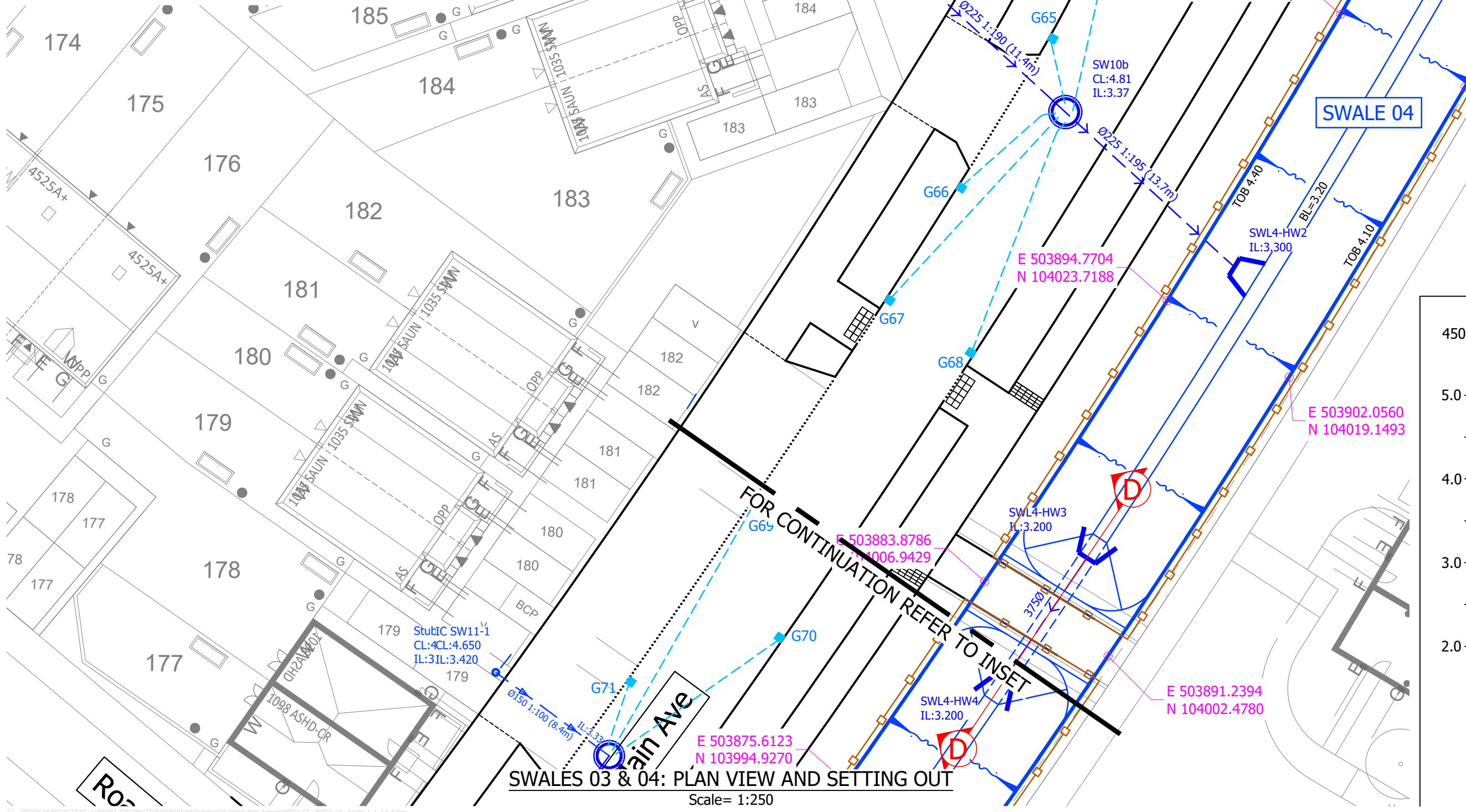
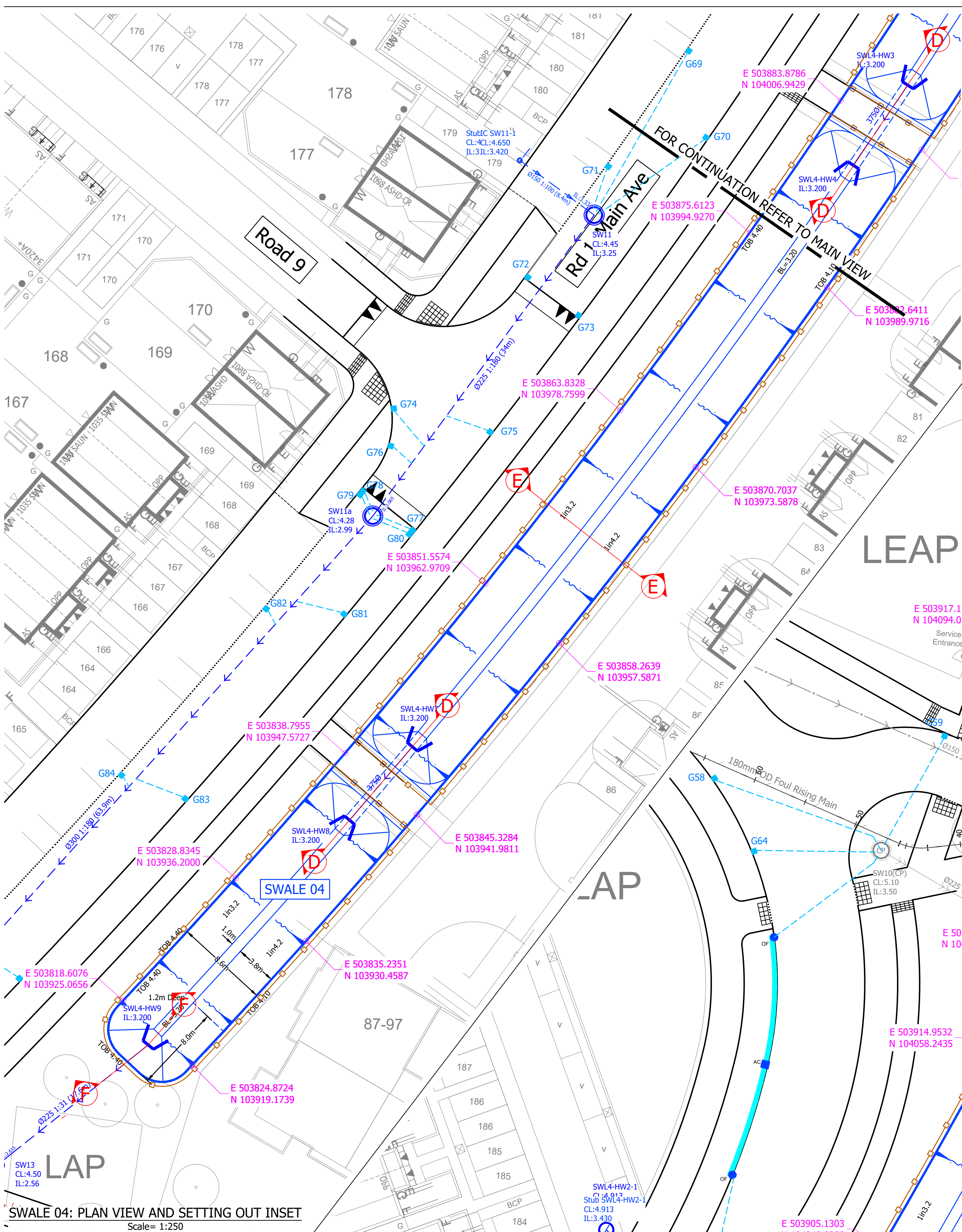
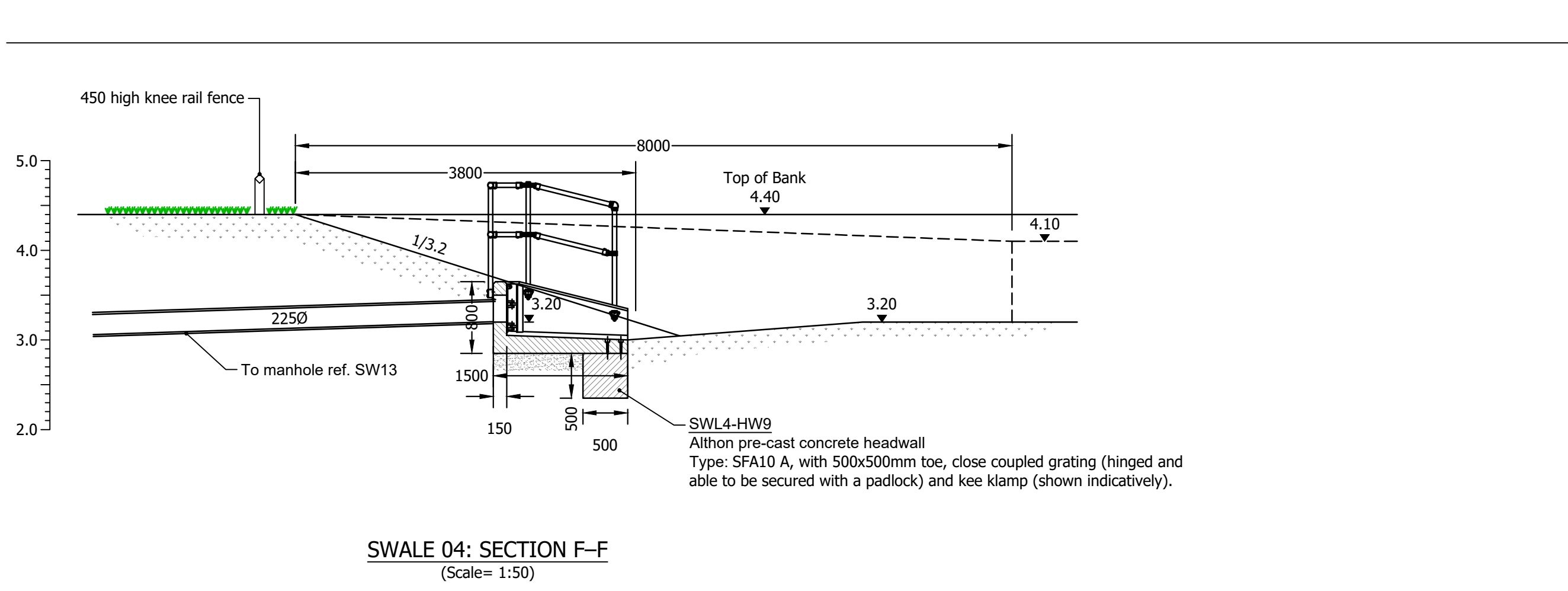
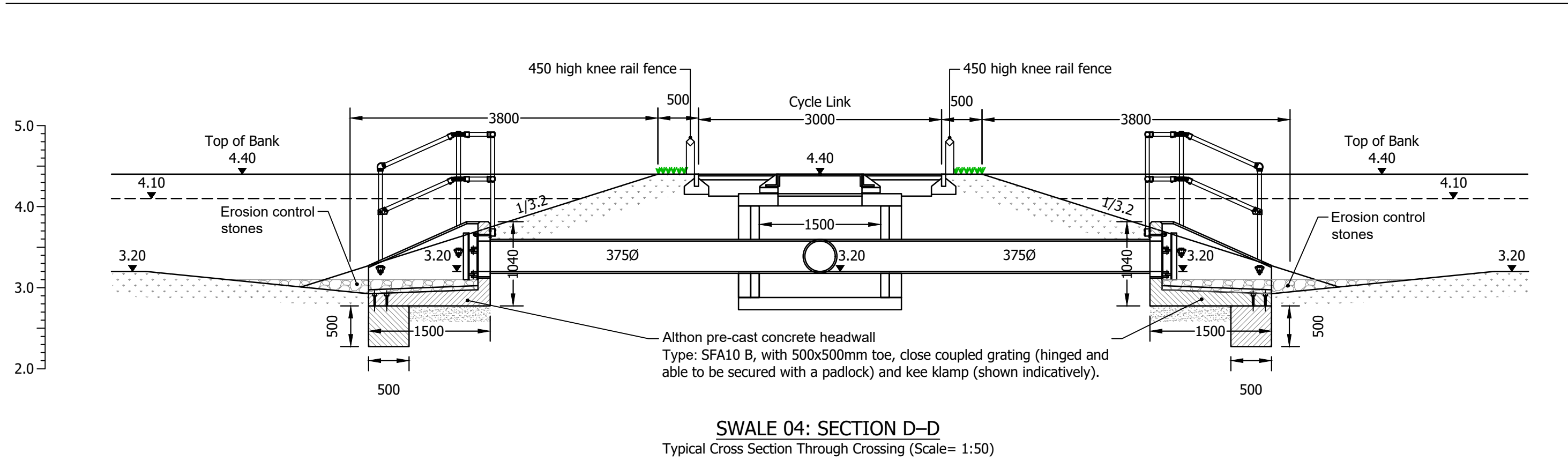
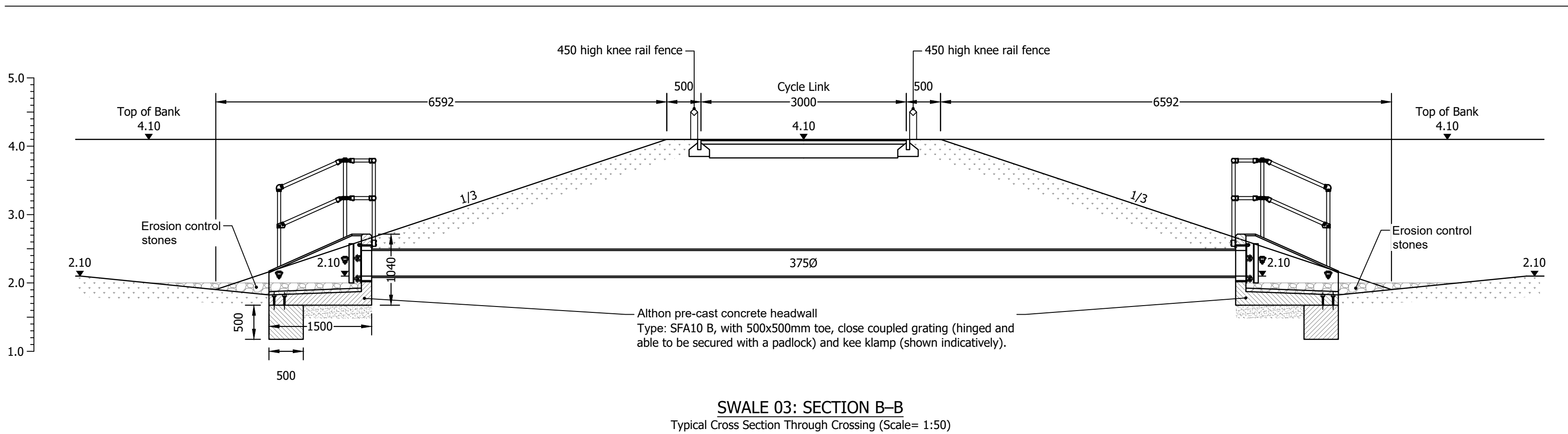
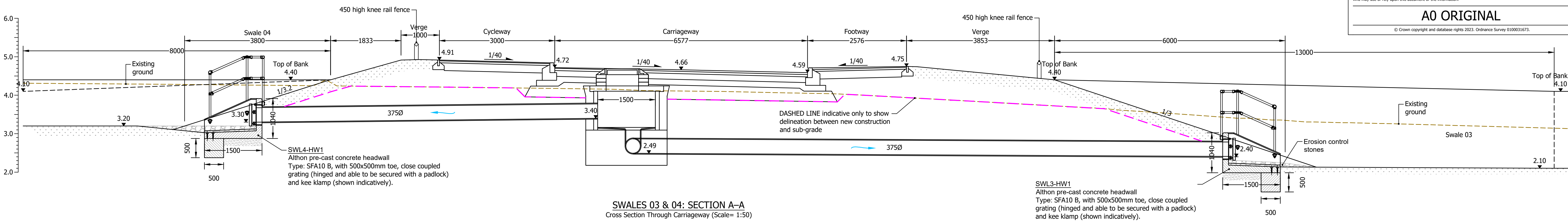
BEBO ARCH - Precast Concrete Arch
Wetland Ground Level = 1.38m AOD
2.1m Clear Height = Underside Structure = 3.48m
Structure Thickness 320mm, Crown = 3.80m
Carriageway Level @ Crown = 4.67m AOD
Back of footpath level @ Crown = 4.80m AOD
Footpath 1.0m Clear over crown



- **CLIENT RISK**** - Please note that the Section 38 Works indicated on this drawing are subject to Technical Approval by West Sussex County Council and therefore the works indicated on the drawing are subject to change. At the request of Persimmon Homes, this drawing is issued for 'Construction' and therefore Mayer Brown Ltd takes no responsibility for any alterations to the design or associated costs required to achieve technical approval.

rev.	amendment	checked	date
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- NOTES:
1. This drawing is not to be scaled.
 2. All dimensions are in millimetres, unless stated otherwise.
 3. Levels are in metres above Ordnance Datum (m AOD).
 4. This drawing is to be read in conjunction with Mayer Brown "Drainage General Arrangement Drawing" reference A/PHLITTLE-MAIN-1/20 series.
 5. For details of the headwalls refer to Mayer Brown "Headwall Schedule" doc. reference "PHLITTLE.10/HWS".
 6. Headwalls to be supplied and installed as per manufactures guidelines.
 7. Grating for headwalls to be in accordance with the requirements of the Code for Adoption Design and Construction Guidance Figure C.3.

CLIENT RISK - Please note that the Section 38 Works indicated on this drawing are subject to Technical Approval by West Sussex County Council and therefore the works indicated on the drawing are subject to change. At the request of Persimmon Homes, this drawing is issued for "Construction" and therefore Mayer Brown Ltd takes no responsibility for any alterations to the design or associated costs required to achieve technical approval.

FOR CONSTRUCTION

C5	Discharge rate and position amended for SW32 updated. Knee rail fence added. (TC)	SF	14/02/2024
C4	Swale 03 dropped by 300mm. Top of bank of Swale 04 (western bank only) dropped by 300mm. Sections updated. Headwall schedule removed and note 5 added. (TC)	SF	17/03/2023
C3	Drainage updated. (TC)	SF	30/11/2022
C2	Drainage updated. (TC)	SF	11/11/2022
C1	Status changed to **For Construction**. (TC)	SF	21/07/2022
T1	Initial Issue. (IC)	SF	21/06/2022

rev.	amendment	checked	date

client			
PERSIMMON HOMES THAMES VALLEY			
project			
NORTH LITTLEHAMPTON EAST OF WETLANDS MAIN AVENUE & NORTHERN CROSSING			
scale			
AS SHOWN	drawn by	IC	checked by
drawn by	MBF03.DWG	checked by	SF
date			
JULY 2021	date file	MBF03.DWG	date
title			
SWALES 03 & 04 CONSTRUCTION DETAILS AND SETTING OUT			
Mayer Brown Limited jobcode			
drawing number			
MB/F/03			

NOTES

- GENERAL
01. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
02. ALL LEVELS ARE IN METRES AND RELATIVE TO ORDNANCE DATUM (A.M.S.L.)
03. THIS DRAWING IS A PRELIMINARY DESIGN AND IS NOT TO BE USED FOR CONSTRUCTION WITHOUT THE APPROVAL OF THE DESIGNER.
04. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY.
05. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY.
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07. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY. THE SURVEY HAS BEEN COMPLETED SINCE THE DATE OF THE SURVEY.
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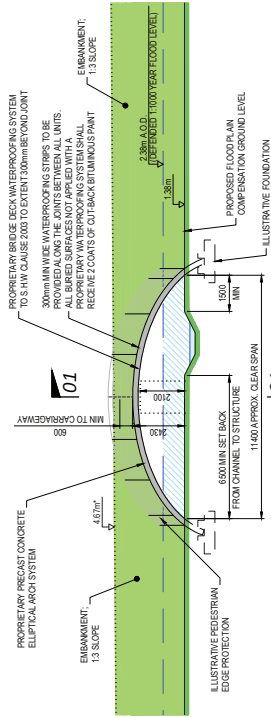


SCHEMATIC PLAN

1:20

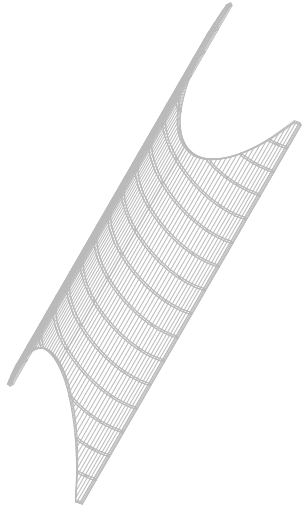
EAST

WEST

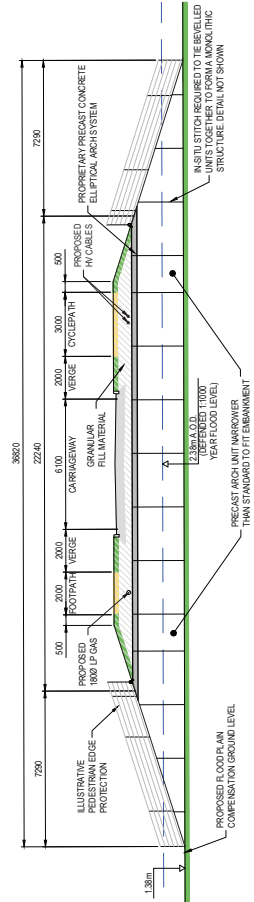


ELEVATION SINGLE SPAN

1:20



3D MODEL VIEW OF ARCH STRUCTURE



SECTION 01-01. ILLUSTRATIVE BRIDGE CROSS SECTION

1:25



LOCATION PLAN

PO1	ISSUED TO TIA	28.08.18	AJA	TOSG	JWS
PO2	ISSUE FOR PLANNING	21.08.18	CRD	TOSG	JWS
PO3	CHANNEL SET BACK DIMENSION ADDED	17.07.18	GCP	TOSG	JWS
PO4	FIRST ISSUE	06.06.18	CRD	JWS	JWS
Mark	Revision	Date	Drawn	Checked	App'd

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on the drawing is for information only. The Contractor is to undertake their own investigation where the presence of any existing services is shown to be in a position where they may be affected by the proposed works.

FOR APPROVAL

NORTH LITTLEHAMPTON
CENTRAL WETLAND AREA
NORTH CROSSING
GENERAL ARRANGEMENT

Client

PERSIMMON

Date of issue
06.06.2018

Drawn
TOSG

Checked
JWS

As shown
JWS

Drawn
JWS

Checked
JWS

App'd
JWS

Drawn Number
35944/1507/003

Revision
P04

www.peterbratt.com

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REASONS

The 01889 500 761



TODDINGTON PARK, LITTLEHAMPTON



PROPOSED INDICATIVE SURFACE WATER MANAGEMENT PLAN
NOT TO SCALE

KEY

- EXISTING DRAINAGE DITCH TO BE RETAINED
- PROPOSED 'CENTRAL' SWALE DISCHARGING TO BLACK DITCH
- PROPOSED 'SECONDARY' SWALE
- PROPOSED AREA TO BE DRAINED VIA 'WESTERN' SWALE
- PROPOSED BALANCING POND

- DO NOT SCALE; CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS
- NOTES:
1. LEVELS TO BE ESTABLISHED DURING DETAIL DESIGN
 2. EXISTING DITCH AND DRAIN INFORMATION TAKEN FROM ENVIRONMENT AGENCY RIVERS AINLE CATCHMENT (DRAWING NO. 7 DATED DEC 2003)
 3. PERMEABLE PAVING AND BELOW GROUND GEOCELLULAR STORAGE TO BE IMPLEMENTED IN ALL AREAS OF DEVELOPMENT WHERE POSSIBLE
 4. SOAKWAYS AND INFILTRATION METHODS TO BE IMPLEMENTED WHERE GROUND CONDITIONS AND TOPOGRAPHY ALLOW
 5. PAVED DRAINAGE SYSTEMS MAY BE REQUIRED TO SUPPLEMENT OPEN WATER FEATURES
 6. NO SURFACE WATER ATTENUATION WILL BE LOCATED WITHIN AREA OF FLOODPLAIN
 7. MASTERPLAN INFORMATION TAKEN FROM JTP DRAWING 8002A DATED DEC 2010
 8. ESTIMATE OF TOTAL ATTENUATION REQUIRED FOR DEVELOPMENT IS 15.94M³

REV	DESCRIPTION	BY	CHK	APP	DATE
A	MASTERPLAN UPDATED	JF	JP	CT	10/02/13

CLIENT: GREENCORE GROUP PLC



EXECUTIVE PARK
ANALON WAY
ANSTEY
LEICESTER
LE7 7XR
TEL: +44 (0)116 234 8000
FAX: +44 (0)116 234 8001
e-mail: leicester@wyg.com

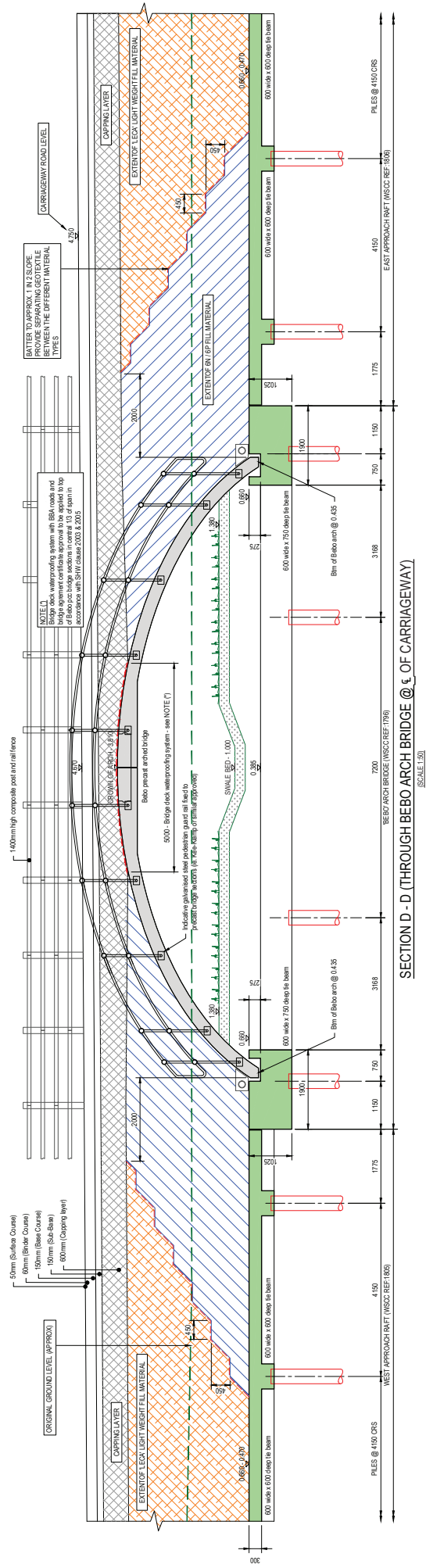
Project:

LAND AT
NORTH LITTLEHAMPTON

Drawing Title:
PROPOSED SURFACE WATER
MANAGEMENT PLAN

Scale @ A4	Drawn	Date	Checked	Date	Approved	Date
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Project No.	Drawn	Type	Drawing No.	Revised	Revised	Revised
A044029	35	12	SK04			A

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Appendix 5: Site Wide Management Plan

Persimmon Homes drawing:

546_SMP_01

Phase 5 / Central Wetland Littlehampton

