



Plots E & F, Station Hill, Reading

Ecological Management Plan

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

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1. Introduction

- 1.1. Waterman Infrastructure & Environment Ltd (Waterman) was commissioned by SH Reading Master LLP (hereafter referred to as the 'Applicant') to prepare an Ecological Management Plan (EMP) for Plots E and F of the Station Hill Development located in Reading City Centre (hereafter referred to as the 'Site').

Site History and Development Proposals

- 1.2. An Outline Planning Application for the redevelopment of the Site was submitted by Sackville Developments Reading Ltd (SDRL) in March 2013 (Planning Reference: 130436). The development, known as SH3, included the demolition of all existing buildings and structures at the Site, excluding the existing multi-storey NCP car park, and replacement with four new commercial buildings (referred to as Building Plots A - D) and two new primarily residential buildings (referred to as Building Plots E and F). The existing NCP car park would be reconfigured and refurbished. The planning application was granted permission in January 2015 and is hereafter referred to as the '2015 Consented Scheme'.
- 1.3. At the same time, an application was submitted for a temporary flexible event space on 0.35 ha of land within the north of the Site (Planning Application Reference: 130440/FUL). The temporary flexible event space was proposed to operate as an interim condition in the north-eastern part of the Site following demolition of the former Station Hill Retail Arcade (including 26 to 58 Station Hill). The temporary flexible events space was granted permission in January 2014.
- 1.4. Subsequent to submission of the application for SH3, SDRL acquired an area of land adjacent to the SH3 Site, known as the Telecom House site. An application to extend and amend Plot E of the 2015 Consented Scheme to incorporate the Telecom House site was submitted in August 2015 (Planning References: 151426 and 151427). These applications were granted permission July 2016.
- 1.5. A reserved matters application was also submitted for Plot B in 2015 and granted permission in August 2016 (Planning Reference: 151543).
- 1.6. Since receiving planning consent, the buildings located within the curtilage of Plots B, C and D have been demolished and the temporary events space has been constructed in the location of Plot C.
- 1.7. SH Reading Master LLP acquired the Site from SDRL in 2018 and are now submitting Reserved Matters Applications (RMAs) for Plots E and F of the Station Hill Development.

Aims and Objectives

- 1.8. This EMP has been prepared to support the RMAs for Plots E and F to provide information to discharge Condition 22 of the Outline Planning Consents (151426 and 151427) which state:

"In respect of each Plot, each application for the approval of Reserved Matters shall be accompanied by details of habitat mitigation works for that Plot (if and to the extent relevant to the subject matter of the Reserved Matters application). This shall include a report detailing the following habitat mitigation works which shall be submitted to and approved in writing by the Local Planning Authority:

- A. locations and specification for bird nesting habitats for Black Redstarts, Swifts and Peregrine Falcons;*

B. specifications for green roofs and brown roofs (to be a minimum area of 25% of each Plot's roof area in the development), including their method of construction and landscaping on-going management for five years; and

C. details of the ground level planting scheme (demonstrating how it has been designed to maximise its benefit to wildlife within the context of the scheme).

These approved habitat mitigation works shall be in place prior to completion of the relevant building / Plot and retained thereafter. Reason: to ensure that a habitat which would be designed specifically for these birds is created / re-provided for within the development, in the interests of biodiversity"

2. Relevant Planning Policy and BAPs

Planning Policy

Reading Borough Local Development Framework: Core Strategy

- 2.1. For the purposes of this report, only local planning policy has been referenced given the planning condition being addressed in this report.
- 2.2. The Reading Borough Local Development Framework Core Strategy¹ was adopted in January 2008 with alterations adopted in January 2015². This document sets out the Council's adopted planning strategy for the Borough. It sets out how planning and development will achieve the Reading 2020 Vision for the town. It provides a framework for how Reading can grow in a sustainable way in the future. The following policies are of relevance to this report:
- 2.3. Policy CS36 – Biodiversity and Geology states:
 - "a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:
 - i. The need for development clearly outweighs the need to protect the value of the site; and
 - ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.
 - b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.
 - c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate."
- 2.4. Policy CS38 – Trees, Hedges and Woodlands states:

"Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough's vegetation cover will be extended."

Reading Borough Local Development Framework, Sites and Detailed Policies Document

- 2.5. Policy DM3 of the Sites and Detailed Policies Document³ relates to infrastructure Planning. The policy states that in determining planning applications the highest priority will be given to "open space, green infrastructure and other measures to improve or enhance biodiversity".

¹ <http://www.reading.gov.uk/documents/transport.../CD-2.6-Core-Strategy.pdf>

² Reading Borough Council (January 2015). *Reading Borough Local Development Framework: Core Strategy*.

³ Reading Borough Council (2012). *Reading Borough Local Development Framework, Sites and Detailed Policies Document, Adopted 2012*

Reading Borough Local Development Framework, Reading Central Area Action Plan

- 2.6. The Reading Central Area Action Plan (RCAAP) adopted in 2009⁴, stresses that the design and construction of new developments in the centre of Reading should be sustainable in nature. The Plan draws attention to the use of green and brown roofs which “*may enhance the biodiversity value of developments in the centre. Brown roofs in particular are of benefit to species such as black redstarts, one of the priority species in the [Reading] Biodiversity Action Plan, which have been sighted in the central area*”.

Station Hill South Planning and Urban Design Brief

- 2.7. The Station Hill Planning and Urban Design Brief⁵ acknowledges that the ecology of the area is mainly limited to black redstarts *Phoenicurus ochruros*, which are known to nest in the area. Design principle 8 states:

“Developments should demonstrate positive yield in terms of environmental and ecological benefits...”;

“Development should meet the requirements of the local Biodiversity Action Plan (BAP)”;

“Building tall buildings can also yield potential ecological and environmental benefits by integrating vertical landscaping, roof gardens or vegetation within the architecture. Further consideration will be expected as part of any application for taller buildings.”

Reading Local Plan 2018

- 2.8. Reading Borough Council are currently producing a new Local Plan⁶, which once adopted will replace the existing development plans detailed above. The new Local Plan was submitted to the Secretary of State for examination on Thursday 29th March 2018. The following policies relate to the Site and/or biodiversity and nature conservation:

- EN12: Biodiversity and The Green Network; and
- CR11: Station / River Major Opportunity Area
 - CR11a: Friar Street & Station Road;
 - CR11b: Greyfriars Road Corner;
 - CR11c: Station Hill & Friars Walk.

Biodiversity Action Plans

UK Post-2010 Biodiversity Framework

- 2.9. The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17th July 2012, the 'UK Post-2010 Biodiversity Framework'⁷ covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)⁸. However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority

⁴ Reading Borough Council (2009). *Reading Borough Local Development Framework: Reading Central Area Action Plan To 2026*.

⁵ Reading Borough Council (2007). *Station Hill South Planning and Urban Design Brief*.

⁶ Reading Borough Council (2018) *Submission Draft: Reading Borough Local Plan*.

⁷ JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). 2012. UK Post-2010 Biodiversity Framework. July 2012. Available from: <http://jncc.defra.gov.uk/page-6189>.

⁸ HMSO (1994) Biodiversity The UK Action Plan

habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

- 2.10. Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) in England listed under S41 of the NERC Act 2006. For the purpose of this report, HoPI and SoPI listed under S41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under Section 41.
- 2.11. The following SoPI listed under S41 of the NERC Act 2006 are considered to be of relevance to this report due to the Site's location, baseline conditions (refer to Section 3 below) and the proposed mitigation and enhancement measures:
- Soprano pipistrelle *Pipistrellus pygmaeus*;
 - Noctule *Nyctalus noctule*;
 - House sparrow *Passer domesticus*;
 - Starling *Sturnus vulgaris*.

Local Biodiversity Action Plan

- 2.12. At a local level, the Site is covered by The Reading Biodiversity Action Plan (RBAP)⁹. The RBAP sets out a methodology to protect, conserve and enhance Reading's diversity of wildlife. Based on the results of the PEA, the following Habitat Action Plans (HAPs) and Species Action Plans (SAPs) listed on the RBAP are considered to be of potential value on and/or immediately adjacent to the Site:
- 2.13. The following LBAP HAP and SAPs are considered of relevance to this report:
- Urban 1 (Man-made site and structures);
 - Bats;
 - House sparrow; and
 - Black redstart.

⁹ The Reading Biodiversity Action Plan. http://www.reading.gov.uk/media/5972/Reading-Biodiversity-Action-Plan/pdf/Reading_BAP_February_062.pdf Access in November 2018.

3. Baseline and Future Site Conditions

Baseline Conditions

- 3.1. A Preliminary Ecological Appraisal (PEA)¹⁰ was undertaken at the Site (including Plots E and F) in August 2018. As part of the PEA the following ecological assessments were undertaken:
- Ecological data search;
 - 'Extended' Phase 1 Habitat Survey;
 - Preliminary bat roost inspections;
 - Invasive plant species assessment; and
 - Black redstart survey
- 3.2. Plot E is located at Ordnance Survey Grid Reference SU 71327 73638 and currently comprises buildings (B3 and B4, refer to PEA) and hard standing. As part of the preliminary bat roost inspections, Building B3 was assessed as having low potential to support roosting bats and B4 was assessed as having negligible potential to support roosting bats. A subsequent bat survey¹¹ confirmed the likely absence of roosting bats within B3, however a small number (1-3 individuals) of common pipistrelle bat passes were recorded during the survey in the wider environment.
- 3.3. Plot F is located at Ordnance Survey Grid Reference SU 71393 73680. Plot F currently comprises buildings (B3, refer to PEA) and hard standing. B3 and an adjoining adjacent building (B7) were assessed as having low potential to support roosting bats in the PEA, however a subsequent bat survey¹² confirmed the likely absence of roosting bats within these buildings.
- 3.4. Overall Plots E and F were assessed to be of limited ecological value owing to the habitat types present. However, it was noted that the buildings within Plots E and F have potential to support breeding birds including black redstarts.

Future Conditions

- 3.5. The soft landscaping (both at ground and roof level) provides east-west and north-south green links of varying growth heights which will provide texture and a contoured topography across Plots E and F.
- 3.6. Once fully established, this planting will provide nesting habitat for birds and create a range of micro-habitats for invertebrates which utilise different sward heights at different stages during their life-cycle. In addition, the plant species composition comprises species which have varying flowering periods, which span from early Spring to Autumn. This is particularly beneficial to invertebrate species because it will provide an extended pollen and nectar source throughout the year. Once the soft landscaping is fully established, it will support an invertebrate community which will provide foraging opportunities for birds, bats and other wildlife.
- 3.7. The landscape proposals for the Site incorporate both native and non-native species. Given the Site's largely urbanised surroundings and those habitats previously present it is considered that in addition to the planting of native species, the non-native species to be planted would also be of benefit to biodiversity and contribute to enhancing the ecological value of the Site. Non-native plant species would provide nesting and foraging habitat for birds, whilst nectar producing species would provide foraging habitat for invertebrates which in turn would become a foraging resource for birds and bats in the local area.

¹⁰ Waterman IE (2018) *Preliminary Ecological Appraisal: Station Hill, Reading*. Ref: WIE14788-100-R-1-2-1-PEA.

¹¹ Waterman IE (2018) *Bat Survey Report: Station Hill, Reading*. Ref: WIE14788-100-R-2-2-1-BAT.

¹² Waterman IE (2018) *Bat Survey Report: Station Hill, Reading*. Ref: WIE14788-100-R-2-2-1-BAT.

- 3.8. Whilst it is assessed that the soft landscaping and provision of artificial bird, bat and insect boxes will enhance Plots E and F for biodiversity, there also exists the potential to enhance the ecological value of Plots E and F further through the appropriate management of them. This will provide opportunities for a range of S41 and LBAP species such as those listed within Section 2 above.
- 3.9. Management and monitoring prescriptions are as set out within Sections 4 – 8 below. As a general recommendation, where new landscaping is to be undertaken, horticultural practice will include the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) and chemical fertilizers will be discouraged to prevent fatal effects on the food chain particularly invertebrates, birds and / or mammals and any weed removal will be undertaken by hand. Any pesticides used will be non-residual. Should fertiliser be required to maintain the health of particular plant species, fertiliser application will be kept to a minimum and will be in accordance with the advice of the supplier.

4. Bird Nesting Habitat

- 4.1. This section relates to Part A of Condition 22, which requests “locations and specification for bird nesting habitats for Black Redstart, Swift and Peregrine Falcon”, and follows consultation with Giles Sutton at GS Ecology on behalf of Reading Borough Council (RBC) in May 2019. The location of the bird boxes to be incorporated into the scheme are provided within **Appendix A**.

Plot E

- 4.2. The following artificial nesting sites will be provided at Plot E (precise locations are presented in **Appendix A**):
- **lbstock eco-habitat / Schwegler 16S, or similar for swifts** - Thirty swift boxes will be incorporated into the fabric of the buildings within Plot E with a clear adjacent airspace for the swifts to fly into. The boxes will be located on the northerly façades at the following levels:
 - 6 boxes on Level 10 fronting Gerrard Street;
 - 12 boxes on Level 11 fronting Gerrard Street;
 - 6 boxes on Level 9 fronting Level 1 north roof terrace;
 - 6 boxes on Level 5 fronting Level 1 south roof terrace;
 - **Schwegler 1HE, or similar bird box for black redstarts** - Four bird boxes for black redstarts will be incorporated into the fabric of the buildings within Plot E. The boxes will be located on the northerly façade and be in proximity to vegetated roof areas at the following levels:
 - 2 boxes on Level 9 fronting Level 0 courtyard;
 - 2 boxes on Level 5 fronting Level 1 south roof terrace.
- 4.3. It is noted that no artificial nest sites for peregrine falcon are included within Plot E. Given the height of the proposed buildings it is highly unlikely that a nest box would be used by this species. Previously peregrine falcons have been seen perching on the former Western Tower building within wider Development (not within Plot E). This EMP is prepared on the basis that Plot E forms one part of the whole of the Station Hill Development (Planning Reference: 151426 and 151427), which comprises seven plots (Plots A to G). A peregrine falcon box will be provided upon the building within Plot B (and / or taller buildings proposed within the other plots) as documented in the Plot B EMP¹³. As such it is not considered appropriate to install a peregrine falcon box within Plot E.

Plot F

- 4.4. The following artificial nesting sites will be provided at Plot F (precise locations presented in **Appendix A**):
- **lbstock eco-habitat / Schwegler 16S, or similar for swifts** - Twelve swift boxes will be incorporated into the fabric of the buildings within Plot F. The boxes will be located on the northerly façade on Level 11 fronting Gerrard Street with a clear adjacent airspace for the swifts to fly into;
 - **Schwegler 1HE, or similar bird box for black redstarts** - Two bird boxes for black redstarts will be incorporated into the fabric of the buildings within Plot F. The boxes will be located on the easterly façade on Level 10; and
- 4.5. As with Plot E, no artificial nest sites for peregrine falcon are included within Plot F.

¹³ Waterman (2016) *Ecological Management Plan: Building B, Station Hill, Reading* (Ref: WIB12350-111-R-6.6.3-SD).

Installation and Maintenance

- 4.6. The instructions for bird box instalment will be followed as provided by the product supplier. The CDM Regulations 2015 have been considered for the installation of the bird boxes as outlined in risk assessment in **Table 1** below.
- 4.7. No regular maintenance will be required, however damaged boxes will be repaired or replaced as necessary over the five-year EMP period. The boxes will be replaced in their original positions.

Table 1: CDM Risk Assessment – Provision of Bird Boxes

CDM Design Rationale	Hazard Control Mechanism	Residual Risk Level
Location for instalment	The locations of the bird boxes are detailed in Appendix A. The locations have been selected for ecological reasons to increase the likelihood of nesting birds utilising the features provided (located on an aspect of the building to ensure the features receive the desired optimal levels of solar radiation; as close to green infrastructure as possible; and in an area where artificial lighting will not shine directly upon the feature). The locations have however also been selected to avoid potential hazards to personnel undertaking future maintenance and monitoring (see sections below). The bird boxes are to be installed on buildings and are therefore highly unlikely to be dislodged from their position given they will be incorporated into the fabric of the building.	Negligible
Maintenance	The bird boxes selected are maintenance free in terms of their usage. However, should the boxes need to be replaced due to damage, safe and appropriate access to the boxes should be set out within the contractor's own risk assessment.	Negligible
Manual handling	The weight of the Ibstock eco-habitat for swifts is 4.5kg. The weight of the Schwegler 16S box is 12kg, and the Schwegler 1HE brick bird box is 2.6kg. These boxes have been selected to minimise manual handling risks during installation and replacement (if required).	Negligible

5. Bat Roosting Habitat

- 5.1. Whilst the provision of bat boxes was not specified within Condition 22, given that bats have been recorded roosting within Reading Town Centre, bat boxes are to be provided within Plots E and F to provide enhanced roosting opportunities for the local area. The location of the bat boxes to be incorporated into the scheme are provided within **Appendix A**.

Plot E

- 5.2. The following artificial roosting sites will be provided at Plot E (precise locations are presented in **Appendix A**):
- **Schwegler 1FR Bat Tube, Ibstock Bat Box 'B' or similar** - Four bat boxes are to be incorporated into the fabric of the buildings within Plot E. Two boxes will be located on a southern wall at Level 11 with a sedum green roof two levels below, with two boxes also located on a south-west wall at Level 6 with a sedum green roof one level below.

Plot F

- 5.1. The following artificial roosting sites will be provided at Plot F (precise locations are presented in **Appendix A**):
- **Schwegler 1FR Bat Tube, Ibstock Bat Box 'B' or similar** - Two bat boxes are to be incorporated into the fabric of the buildings within Plot F. The boxes will be located on a southern wall at Level 4 within close vicinity to the linear planter along Friars Walk.

Installation and Maintenance

- 5.2. The instructions for bat box instalment will be followed as provided by the product supplier. The CDM Regulations 2015 have been considered for the installation of the bird boxes as outlined in risk assessment in **Table 2** below.
- 5.3. No regular maintenance will be required, however damaged boxes will be repaired or replaced as necessary over the five-year EMP period. The boxes will be replaced in their original positions.

Table 2: CDM Risk Assessment – Provision of Bat Boxes

CDM Design Rationale	Hazard Control Mechanism	Residual Risk Level
Location for instalment	The locations of the bat boxes are detailed in Appendix A . The locations have been selected for ecological reasons to increase the likelihood of roosting bats utilising the features provided (located on an aspect of the building to ensure the features receive the desired optimal levels of solar radiation; as close to green infrastructure as possible; and in an area where artificial lighting will not shine directly upon the feature). The locations have however also been selected to avoid potential hazards to personnel undertaking future maintenance and monitoring (see sections below). The bat boxes are to be installed on buildings and are therefore highly unlikely to be dislodged from their position given they will be incorporated into the fabric of the building.	Negligible
Maintenance	The bat boxes selected are maintenance free in terms of their usage. However, should the boxes need to be replaced due to damage, safe and appropriate access to the boxes should be set out within the contractor's own risk assessment.	Negligible
Manual handling	The weight of the Schwegler 1FR Bat Tube is 9.8kg, and the weight of the Ibstock Bat Box 'B' is 8kg. These boxes have been selected to	Negligible

CDM Design Rationale	Hazard Control Mechanism	Residual Risk Level
	minimise manual handling risks during installation and replacement (if required).	

6. Invertebrate Habitat

- 6.1. Two 'bug hotels' will be included within the soft landscaping proposed on the level one podium of Plot E. The bug hotels will be installed between 0 and 1m above ground level in a position that receives a combination of sun and shade. These features will provide foraging and sheltering habitat for invertebrates which in turn will create a foraging resource for bats and birds. The location of the 'bug hotels' to be incorporated into the scheme are provided within **Appendix A**.
- 6.2. The bug hotels should not require any specific management or maintenance other than periodic checks to confirm that they remain undamaged and fit for purpose. Damaged bug hotels will be repaired or replaced as necessary over the five-year EMP period.

7. Green Roofs

- 7.1. This section relates to Part B of Condition 22, which requests “specifications for green roofs and brown roofs (to be a minimum area of 25% of each Building’s roof area in the development), including their method of construction and landscaping on-going management for five years”.
- 7.2. Green roofs are a tool in providing habitats for invertebrates and birds located in areas which would otherwise have been devoid of green space¹⁴. Green roofs provided at the Site comprise sedum roofs and podiums/terraces with herbaceous/shrub/tree planting. The location; indicative specification; and method of construction for the sedum roofs is provided within **Appendix B**.

Plot E

- 7.3. The total roof area of Plot E is 4,963m² and will include the following areas of green roofs and podium/terrace planting:
- 104m² of herbaceous/shrub/tree planting on Level 1 (North Terrace);
 - 254m² of herbaceous/shrub/tree planting and species rich lawn on Level 1 (South Terrace);
 - 19m² of herbaceous/shrub planting on Level 6 (Terrace);
 - 145m² of sedum roof on Level 6;
 - 353m² of sedum roof on Level 10;
 - 71m² of sedum roof on Level 11; and
 - 76m² of sedum roof on Level 12.
- 7.4. Soft landscaping upon roofs therefore totals 1,022m² which represents approximately 24.5% of the roof area. Whilst this is 0.5% less than the minimum required area of 25% stated in Condition 22, in consultation with GS Ecology on behalf of RBC, this area is considered sufficient in this case since a number of other biodiversity enhancements are to be provided and a greater provision of green roofs is proposed on Plot F.

Plot F

- 7.5. The total roof area of Plot F is 1,212m² and will include the following areas of sedum roof and podium/terrace planting:
- 64m² of herbaceous/shrub planting and of lawn on Level 11 (Terrace);
 - 25m² of sedum roof on the ground floor (Level 0); and
 - 247m² of sedum roof on Level 12.
- 7.6. Soft landscaping upon roofs therefore totals 273m² which represents approximately 27.5% of the roof area which exceeds the minimum required area of 25% stated in Condition 22.
- 7.7. Management prescriptions for the areas of green roofs are set out below. These are designed to ensure the suitable maintenance of the green roofs at the Plots E and F Site in the long-term.

Management and Monitoring

Objectives

- 7.8. To provide a species rich habitat in an urban area for invertebrates in the long term, therefore supplying a long-term food source for birds and bats in the local area.

¹⁴ Johnston, J and Newton, J (2004) *Building Green: A Guide to Using Plants on Roofs, Walls and Pavements*.

Prescriptions for Sedum Roof

- 7.9. Whilst the green roof will be designed to minimise maintenance, where possible, it is considered that some maintenance (if access to the roof is possible) will be required.
- 7.10. For the first five years, two maintenance visits per year will be undertaken, ideally in spring and autumn.
- 7.11. Maintenance of the green roof will include:
- Removal of debris and dead vegetation from the roof surface, drainage outlets, guttering and inspection chambers (if required);
 - Ensure the drainage outlets are all free draining. Any issues affecting the drainage systems of the roof should be addressed;
 - Weeding and removal of any undesirable vegetation by hand. If weeding is required this should be done in late winter or early spring; and
 - Clear and clean all perimeters and detailing surrounds.
- 7.12. Additional maintenance works may be required in accordance with the manufacturer's specification.
- 7.13. If a significant number of plants/seeds fail to establish these will be replaced following consultation and review of the suitability of the seed mix.
- 7.14. The green roof will also be watered during periods of drought to aid establishment as well as prevent loss in very dry conditions.
- 7.15. If breeding birds are found to be present on the green roof, maintenance works outlined above will be undertaken outside the breeding bird season (March to August inclusive).

Success Indicators

- 7.16. The green roofs would be healthy and species rich, providing suitable habitat for invertebrates and in turn, other species in the local area.

Monitoring

- 7.17. General condition monitoring shall be undertaken and recorded by the landscape contractor during each maintenance visit. Condition will be assessed against the success indicator stated above. Should the sedum roofs be noted to be in an unfavourable condition, appropriate remediation measures should be devised and implemented through consultation with the landscape architect; ecologist and sedum roof manufacturer as required.

Prescriptions for Roof Terraces / Podiums

- 7.18. The prescriptions; success indicators; and monitoring of the roofs terraces and podiums shall follow those set out for the ground level planting provided below.

8. Ground Level Planting

- 8.1. This section relates to Part C of Condition 22, which requests “details of the ground level planting scheme (demonstrating how it has been designed to maximise its benefit to wildlife within the context of the scheme)”.
- 8.2. The ground level planting included within the landscape scheme for Plots E and F is summarised below. The location and specification of the ground level planting is provided within **Appendix C**:
- A 240m² courtyard comprising shrub and herbaceous woodland planting including five river birch *Betula nigra* and five silver birch *Betula pendula* trees;
 - Two herbaceous planting beds with climbers and one hornbeam *Carpinus betulus* tree to the north of Block E along Garrard Street;
 - Three callery pear *Pyrus calleryana* 'Chanticleer' trees to the north of Block F along Garrard Street;
 - One crab apple *Malus* 'Evereste' tree within an herbaceous planting bed to the south-east of Block F; and
 - A herbaceous planting bed to the north of Friar's Walk with additional tree planting between Plots E and F comprising forty Himalayan birch *Betula utilis jacquemontii* trees; one sweet gum *Liquidambar styraciflua*; three Japanese cherry *Prunus serrulata* trees, three juneberry *Amelanchier lamarckii* trees;
 - Three juneberry trees to the south-east of Block F;
 - Three callery pear trees to the south of Block E along Friar Street.
- 8.3. Management objectives and prescriptions for individual habitat types are set out below. These are designed to ensure the suitable maintenance of the Site is undertaken to retain ecological value, whilst ensuring minimal damage and disturbance to the habitats and species they support.

Management and Monitoring

Herbaceous and Shrub Planting

Objectives

- 8.4. Herbaceous planting using both native and non-native species will be used. Although this habitat will primarily be for aesthetic purposes, it will still be of benefit to the Site's ecology. Management will focus on maintaining continuous shrub/plant cover with a neat and tidy appearance.

Prescriptions

- 8.5. The Contractor shall maintain the shrub beds (including ornamental grasses) and hedgerows, ensuring that:
- At the end of each growing season all plant failures are to be replaced;
 - Dead wood, damaged branches and snags are to be removed from the plants and soil to be firmed around the base of the plants;
 - Ornamental shrub beds shall be kept entirely free of weeds for the duration of the maintenance period, using hand weeding. Any perennial weeds shall be controlled by spot herbicide treatment, using appropriate herbicide;
 - Shrubs should be pruned appropriate to the species and the design intention;
 - Removal of spent flowers from perennial plants should be removed through 'deadheading';

- The biodegradable mulch to the ornamental shrub beds and hedgerows shall be maintained at a depth of 75mm;
- Any plants that have been stolen or maliciously damaged shall be identified and listed by the landscape contractor for replacement by the company occupying the Site; and
- All shrub beds shall be watered as required during dry weather until established (3 years from planting).

Success Indicators

- 8.6. Areas of herbaceous planting will be dense and have aesthetic value with no evidence of disease or other impairment. Fruiting and flowering bodies should be present after a few years. Areas of perennial planting will establish quickly and show longevity. Self-seeding may also occur, evidence of foraging birds and invertebrates may also be present.

Monitoring

- 8.7. General condition monitoring shall be undertaken and recorded by the landscape contractor during each maintenance visit. Condition will be assessed against the success indicator stated above. Should the herbaceous planting be noted to be in an unfavourable condition, appropriate remediation measures should be devised and implemented through consultation with the landscape architect and ecologist as required.

Scattered Trees

Objectives

- 8.8. Management will focus on maintaining a neat and tidy appearance, which will encourage tree growth whilst also providing habitats for species such as birds and invertebrates as well as any bats in the local area.

Prescriptions

- 8.9. The following management and monitoring prescriptions are proposed for the trees planted within Plots E and F:
- Where trees with 35cm - 40cm girth and 6m in height are newly planted and staked, the stakes and ties will be checked regularly and adjusted at least twice annually or as required. Broken or damaged stakes will be replaced and ties re-fixed. Stakes will be removed as necessary when the tree is suitably established, but will remain in place for at least the first year;
 - Should new trees planted fail to establish these will be replaced and watering may be required during periods of prolonged drought;
 - To reduce excessive competition, mulching will be laid to a diameter of 0.5m around the base of planted trees to suppress weed growth and will be maintained to a depth of c.75mm;
 - Between April and September inspections will be undertaken with weeds removed by hand;
 - An appropriately qualified arboriculturalist or tree surgeon will be consulted prior to undertaking any major tree works on Site with annual inspections of all trees on Site or adjacent to areas of public access carried out by a trained arboriculturalist according to British Standards. Checks will be made for damage and disease, and pruning will be undertaken to maintain appropriate height clearances for safe pedestrian access (once established) as well as maintaining the health and structural stability of the trees; and

- Formative tree works such as pruning will be undertaken during the winter months (September – February) outside of the breeding bird season. If this is not possible then a nesting bird check will be undertaken by a suitably qualified ecologist prior to works being undertaken to avoid disturbance to breeding birds. Should an active nest be found, works on the tree will be suspended until the young have fledged and left the nest.

Success Indicators

- 8.10. Trees should show good growth structure and form with no evidence of disease or other impairment.

Monitoring

- 8.11. General condition monitoring shall be undertaken and recorded by the landscape contractor during each maintenance visit. Condition will be assessed against the success indicator stated above. Should the scattered trees be noted to be in an unfavourable condition, appropriate remediation measures should be devised and implemented through consultation with the landscape architect and ecologist as required.

Lawn

Objectives

- 8.12. Management will focus on maintaining a neat and tidy appearance, however, although limited, foraging opportunities for species such as birds and invertebrates as well as any bats in the local area would be provided.

Prescriptions

- 8.13. The Contractor shall maintain the amenity grass areas and carry out the following operations:
- During establishment, when the grass has first grown to 50mm high and before the first cut, it shall be rolled in two directions with a light roller;
 - When the grass has grown to a height of 75mm it shall be cut, avoiding root pulling, to half the original height and removed from Site;
 - Further cuts shall be carried out at suitable intervals throughout the growing season to maintain the grass height at approximately 35mm and ensure that it does not exceed 50mm. Mowers shall have their height of cut so adjusted that at no time does 'scalping' take place;
 - A full cut of all grassed areas over the entire Site shall be undertaken during each visit;
 - All arisings shall be collected, removed and disposed of off-Site;
 - During appropriate weather conditions, each spring apply an approved spring / summer fertiliser in accordance with the manufacturer's instructions. The spring fertiliser dressing may be alternated with an autumn dressing with a low nitrogen and higher phosphorus ratio;
 - Any turf/ground shrinkage below finished approved levels during the period shall be made good with turf dressing compost;
 - Any areas of poor germination of grass from the first sowing, shall be lightly scarified and oversown using grass seeds from the same mix, during April – May or September – October, depending on the timing of the first sowing;
 - No damage is to be caused to the stem of any tree or shrub by nylon filament rotary cutters or trimmers;

- All grassed areas shall be watered during dry weather until established (18 months from seeding);
- Any areas of trampling, abrasion or scalping are to be repaired when required; and
- Grass is not to be mown in wet or frosty conditions.

Success Indicators

- 8.14. The lawn will show good growth structure and form with no areas of bare ground, scalping or wash boarding present. Evidence of invertebrates and foraging birds utilising this habitat may also be present.

Monitoring

- 8.15. General condition monitoring shall be undertaken and recorded by the landscape contractor during each maintenance visit. Condition will be assessed against the success indicator stated above. Should the lawn be noted to be in an unfavourable condition, appropriate remediation measures should be devised and implemented through consultation with the landscape architect and ecologist as required.

Climbers

Objectives

- 8.16. To create formal urban plantings that will create strong focal point, create visual, aid habitat creation and biodiversity and provide screening qualities.

Prescriptions

- Galvanised steel wire to be placed on buildings / erection material in approved locations. Wires should be placed in horizontal lines c.300mm apart, from c.600mm off the ground. The wire would be attached as appropriate to securely fix the wire at c.400mm centres along each length;
- In subsequent years remove and replace any plant to be found to be dead, dying, and diseased or affected by vandalism;
- Yearly assess the guying wires and repair if damaged. Any insecure growth should be attached to supporting wires using plastic clips;
- Replace bark/ stone mulch around the base of plants yearly as required to ensure the base remains weed free and the soil retains moisture;
- Watering should be carried out as required to ensure successful establishment and continued thriving of plants. Watering to be carried out to all plants throughout this period. All plants in soft landscape to be watered for a minimum period of 24 months;
- Prune to achieve desired shape and structure. At the same time cut out any damaged wood along with any dead or diseased branches.

Success Indicators

- 8.17. The climbing species will show good growth structure and form with no evidence of disease or other impairment. Evidence of invertebrates utilising this habitat may also be present.

Monitoring

- 8.18. General condition monitoring shall be undertaken and recorded by the landscape contractor during each maintenance visit. Condition will be assessed against the success indicator stated above.

Should the climbers be noted to be in an unfavourable condition, appropriate remediation measures should be devised and implemented through consultation with the landscape architect and ecologist as required.

9. Lighting

- 9.1. The following strategies are proposed for Plots E and F to minimise the impacts of artificial lighting:
- All exterior lighting will be carefully positioned and aimed, integrated with the architecture where appropriate, and specified with suitable optics and accessories to ensure that light is delivered to the point where it is required, thereby avoiding light pollution and light trespass;
 - Where up-lighting of features is used it will be very carefully detailed and aimed to ensure minimal spill of light, and where possible completely eliminate this. Any upward light spill will be kept within the limits for the relevant environmental zone as outlined in the ILP Guidance Notes for the Reduction of Obtrusive Light GN01:2011;
 - Lighting will be carefully adjusted to ensure that no light from the development falls on the locations of bird boxes;
 - The decorative feature elements of the scheme (including the majority of the up-lighting elements) will be switched off at curfew, limiting the timing of this lit effect to that when it can be appreciated by residents and visitors;
 - The use of lighting controls will ensure that lighting is only operational when it is required during the hours of darkness, and adjusting to suit changing times of sunrise and sunset; and
 - To reduce the attractiveness of light sources to invertebrates, warm white (2700 K to 3000 K CCT) LED light sources with little to no output in the UV / extreme blue end of the spectrum will be utilised.
- 9.2. Full details of the lighting strategy for Plots E and F are provided by DPA Lighting Consultants.

10. Conclusions

- 10.1. This EMP produced by Waterman IE sets out the ecological enhancement measures provided within Plots E and F of the Station Hill Development. It is assessed that the information provided within this EMP is sufficient to discharge Condition 22 of the Outline Planning Consents (151426 and 151427) for Plots E and F.
- 10.2. This EMP is based on the current bird, bat and insect box location plans (**Appendix A**) and landscape plans (**Appendices B and C**) submitted to accompany the Reserved Matters Application. Should revisions be made to the landscape proposals, then this EMP should also be reviewed and updated as necessary.



APPENDICES

Appendices

Plots E & F, Station Hill, Reading
WIE14788-100
WIE14788-100-R-7-3-1-EMP



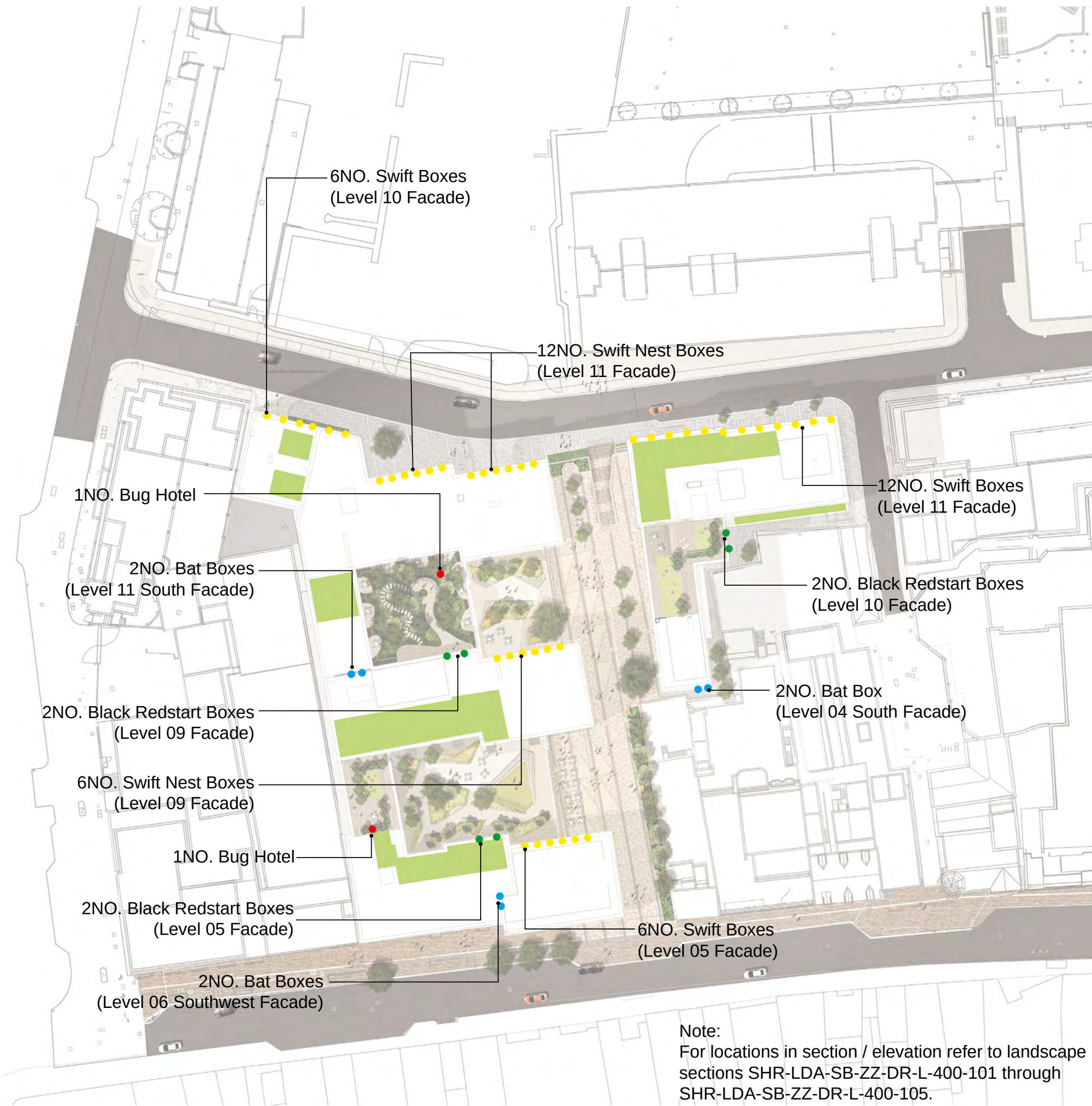
A. Bird, Bat and Insect Box Location Plans

Appendices

Plots E & F, Station Hill, Reading

WIE14788-100

WIE14788-100-R-7-3-1-EMP



Note:
 For locations in section / elevation refer to landscape sections SHR-LDA-SB-ZZ-DR-L-400-101 through SHR-LDA-SB-ZZ-DR-L-400-105.

● Bug Hotel



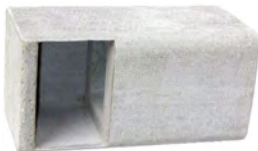
● Swift Box, Ibstock Eco-Habitat, Schwegler 16S, or similar



● Bat Box, Schwegler 1FR Bat Tube, IB Stock Bat Box'B' or Similar



● Black Redstart Box, Schwegler 1 HE or similar



■ Sedum Green Roof, Radmat SedumPlus

P04	PLANNING AMENDMENTS	CI 23.05.19
P03	STAGE 3 ISSUE	CI 04.03.19
P02	FOR INFORMATION	CI 04.03.19
P01	FOR INFORMATION	CI 11.01.19

LDĀDESIGN

PROJECT TITLE

STATION HILL READING

DRAWING TITLE

WILDLIFE INSTALLATION PLAN

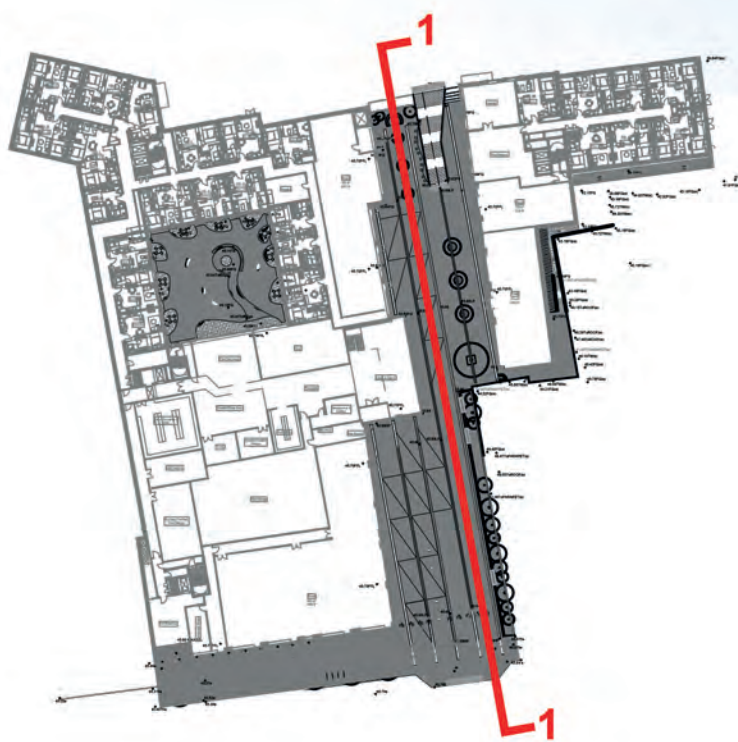
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STATUS	FINAL	APPROVED	CI

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Sources: Ordnance Survey...



- BAT BOXES
- SWIFT NEST BOXES

P04	PLANNING AMENDMENTS	CI	23/05/19
P03	STAGE 4A ISSUE	CI	26/04/19
P02	ISSUED FOR PLANNING	CI	08/02/19
P01	FOR INFORMATION	CI	19/1/19
REV.	DESCRIPTION	APP.	DATE

LD&A DESIGN

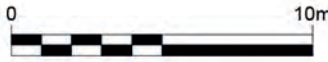
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STATION HILL READING BLOCK E & F

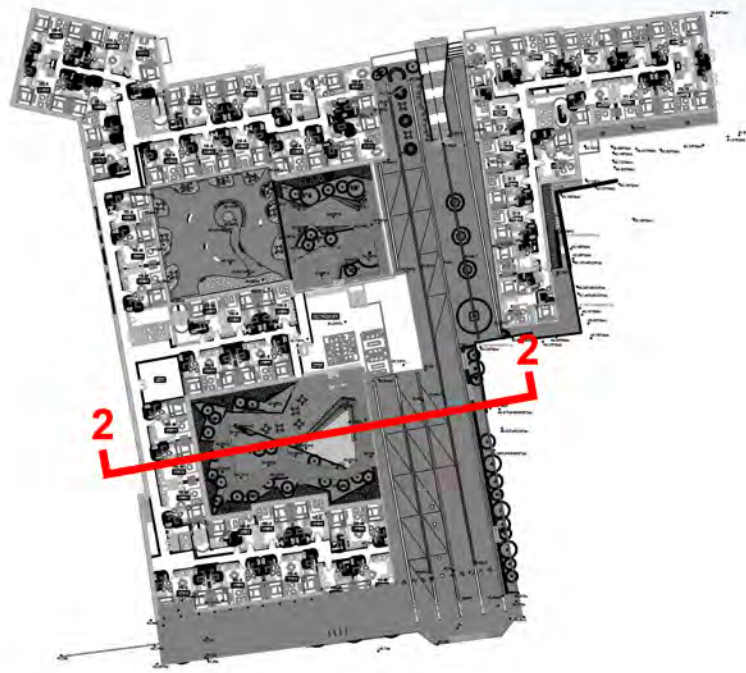
DRAWING TITLE
BLOCK E&F SITE SECTION FRIARS WALK
LOOKING EAST

ISSUED BY	London	T: 020 7467 1470
DATE	Jan 2019	DRAWN SZ
SCALE@A1	1:250	CHECKED BW
STATUS	Sketch	APPROVED CI

DWG. NO SHR-LDA-SB-ZZ-DR-L-400-101

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Sources Ordnance Survey





- BAT BOXES
- BUG HOTEL



P04	PLANNING AMENDMENTS	CI	23/05/19
P03	STAGE 4A ISSUE	CI	26/04/19
P02	ISSUED FOR PLANNING	CI	08/02/19
P01	FOR INFORMATION	CI	18/1/19
REV.	DESCRIPTION	APP.	DATE

LDĀDESIGN

PROJECT TITLE
STATION HILL READING BLOCK E & F

DRAWING TITLE
BLOCK E&F SITE SECTION THROUGH
BLOCK E AND FRIARS WALK
LOOKING NORTH

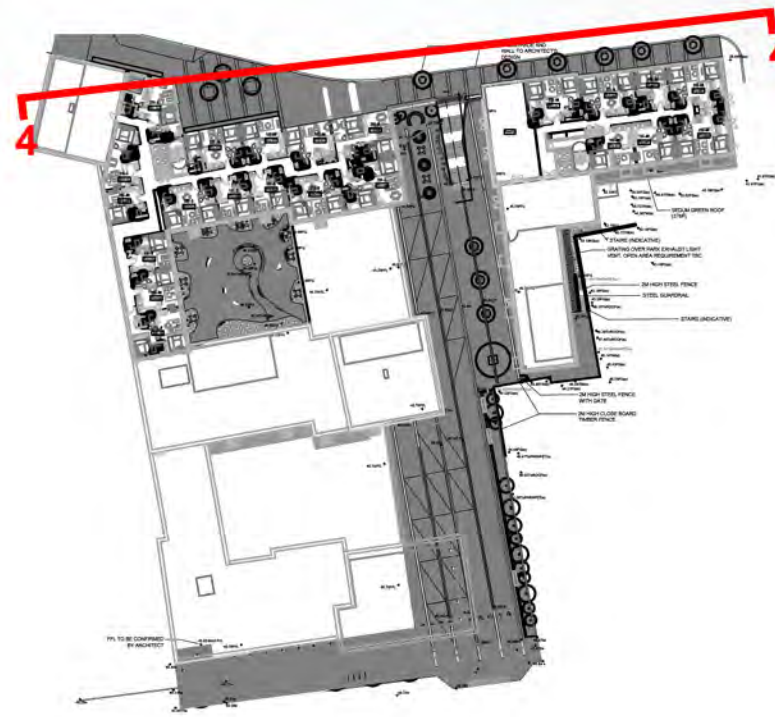
ISSUED BY	London	T: 020 7467 1470
DATE	Jan 2019	DRAWN SZ
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STATUS	Sketch	APPROVED CI

DWG. NO SHR-LDA-SB-ZZ-DR-L-400-102

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● SWIFT NEST BOXES



P04	PLANNING AMENDMENTS	CI	23/05/19
P03	STAGE 4A ISSUE	CI	26/04/19
P02	ISSUED FOR PLANNING	CI	08/02/19
P01	FOR INFORMATION	CI	18/1/19
REV.	DESCRIPTION	APP.	DATE

LDĀDESIGN

PROJECT TITLE
STATION HILL READING BLOCK E & F

DRAWING TITLE
BLOCK E&F SITE SECTION
THROUGH GARRARD STREET
LOOKING SOUTH

ISSUED BY	London	T: 020 7467 1470
DATE	Jan 2019	DRAWN SZ
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STATUS	Sketch	APPROVED CI

DWG. NO SHR-LDA-SB-ZZ-DR-L-400-104

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B. Green Roof Plans

Appendices

Plots E & F, Station Hill, Reading
WIE14788-100
WIE14788-100-R-7-3-1-EMP

Med0 **SedumPlus**

Product Data Sheet



A low maintenance, drought resistant, ready to lay sedum vegetation blanket (Mat).

Product Data Sheet

General Information

Radmat SedumPlus sedum blanket is a low maintenance, drought resistant, ready to lay sedum vegetation blanket (Mat). Grown in the UK SedumPlus comprises sixteen varieties of sedum pre-grown in a strong biodegradable 450g/m² felt mat made from recycled British textiles.

Providing a variety of colour and interest, Radmat SedumPlus has been specially developed to provide a variety of different leaf types and flowers throughout the year whilst enhancing biodiversity. Colours range from greens through to vibrant reds, oranges, purples and browns at appropriate times of the Spring and Summer.

Installation instructions

Unroll over a suitably prepared and irrigated Radmat growing medium. Loosely butt sides and ends. Once installed irrigate for the prescribed period based on season.

Directions of applications

Delivery Form

Rolls

Storage and transport

48m² Delivered on a pallet. Store flat.

Product Dimensions		
Subject	Performance	Unit
Vegetative Coverage	80	%
Length	2.0	m
Width	0.6 or 1.2	m
Thickness	25	mm
m ² / roll	1.2 or 2.4	m ²
Weight / m ² (saturated)	25	kg
Species mix		
Variety	Common name	Description
Sedum Stoloniferum	Stolon Stonecrop	20cm, pink, starshaped flowers, red stems
Sedum Pulchellum	Widow's-cross	10cm, brilliant pink, rich flowering, lush green foliage
Sedum Oreganum	Oregon stonecrop	5cm, yellow, forms cushions, red-brown in sunlight.
Sedum Montanum	Jenny	20cm, golden, dark green needle-like foliage.
Sedum hybridum	Czars Gold	15cm, golden, rich flowering, reddish stems, ever green carpet
Sedum hispanicum	Spanish Stonecrop	10cm, cushion plant, whitish-pink, grey-green cushions.
Sedum Floriferum	Bailey's Gold	10cm, golden, evergreen, crenate foliage.
Sedum Ellacombianum	Selskianum hort	10cm, yellow, unbranched stems and scalloped leaves.
Sedum aizoon	Euphorbioides	40cm, abundant yellow star shaped flowers.
Sedum acre	Oktoberfest	6cm, bright cream-white starflowers, fresh green cushions.
Sedum acre	Yellow	6cm, yellow, mat-forming.
Sedum album	White	10cm, white umbel panicles.
Sedum Spurius	Coccineum	15cm, dark pink flowers.
Sedum Sexangulare	Tasteless Stonecrop	8cm, lemon yellow, dense sweet smelling foliage.
Sedum Reflexum	Crooked Yellow Stonecrop	30cm, yellow flowers with grey leaves.
Sedum telephium	Fabaria	40cm, dense purple-red umbels, dark stemmed, strong blue-green foliage. Attracts bees.

This information given in good faith and is based on the latest knowledge available to Radmat Building products Ltd. Whilst every effort has been made to ensure that the contents of the publication are current while going to press, customers are advised that products, techniques and codes of practice are under constant review and liable to change without notice.

For further information on Radmat products and services please call 01858 410372, email techenquiries@radmat.com or visit our website www.radmat.com

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Market Harborough, Leicestershire, LE16 7PS
T : 01858 410 372 E : techenquiries@radmat.com

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NOTES

1. Information outside of red line boundary is shown for contextual purposes only and subject to a S278 agreement.
2. Proposed levels and drainage are shown indicatively for concept coordination. Refer to engineers' drawings for all levels, drainage, build ups and services.
3. Refer to Architect's drawings for balustrades and wall claddings.

GENERAL NOTES

1. Do not scale drawing.
2. This drawing must be read in conjunction with all consultants' relevant drawings and specifications.
3. All setting out, levels and dimensions and sequence of construction to be agreed on site prior to ordering/manufacturing of materials.

LEGEND

SOFTWORKS

- PROPOSED HERBACEOUS PLANTING
- PAVING TYPE 16: ARTIFICIAL TURF
- PROPOSED TREES
- LAWN

Level 01 Sheet 01 Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
3 No.			1.5-2.0m	Amelanchier lamarkii	Multistem; 3 x tr.; 3 or 4 stem	Counted
1 No.			2.5-3.0m	Cornus kousa		Counted
1 No.	75-80L		1.5-2.0m	Hamamelis japonica 'Arborea'	Branched	Counted
1 No.	75-80L		2.5-3.0m	Hamamelis japonica 'Arborea'	Branched	Counted
1 No.	90L		2.5-3.0m	Magnolia liliiflora 'Susan'	Branched; Max height 4m	Counted

Shrubs						
Number	Pot Size	Girth	Height	Species	Specification	Density
51 No.	3L			Pachysandra terminalis		9/m²
10 No.	10L		80-100cm	Sarcococca confusa		Counted

Herbaceous						
Number	Pot Size	Girth	Height	Species	Specification	Density
48 No.	3L			Ajuga reptans 'Alba'		9/m²
86 No.	3L			Anemone hybrida 'Honorine Jobert'		9/m²
51 No.	3L			Asarum europaeum		9/m²
43 No.	3L			Astrantia major 'Roma'		9/m²
43 No.	3L			Bergenia 'Bressingham White'		9/m²
51 No.	3L			Brunnera macrophylla 'Jack Frost'		9/m²
26 No.	3L			Digitalis lutea		9/m²
22 No.	3L			Epimedium youngianum 'Niveum'		9/m²
48 No.	3L			Galium odoratum		9/m²
94 No.	3L			Helleborus foetidus		9/m²
73 No.	3L			Hosta 'Devon Green'		9/m²
26 No.	3L			Hosta 'Hadsphen Blue'		9/m²
69 No.	3L			Liriope muscari		9/m²
22 No.	3L			Ophiopogon 'Black Beard'		9/m²
94 No.	3L			Primula vulgaris		9/m²
26 No.	3L			Tiarella 'Spring Symphony'		9/m²
22 No.	3L			Zantedeschia aethiopica 'Crowborough'		9/m²

Ferns					
Number	Pot Size	Height	Species	Specification	Density
51 No.	3L		Asplenium scolopendrium		9/m²



P01 For Planning
REV. DESCRIPTION

CI 29.05.19
APP. DATE

LDA DESIGN

PROJECT TITLE
STATION HILL READING

DRAWING TITLE
BLOCK E LEVEL 01 DETAIL
SOFTWORKS GA -NORTHERN
TERRACE

ISSUED BY: London T: 020 7467 1470
DATE: May 2019 DRAWN: ER
SCALE: A1 1:100 CHECKED: BE
STATUS: Planning APPROVED: CI

DWG. NO SHR-LDA-SB-01-DR-L-320-108

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Area measurements for indicative purposes only.

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Sources: Ordnance Survey, 2009



X:\005\6516 STATION_HILL_READING\TCD\DRAWINGS\STAGE 4B DRAWINGS\SHR-LDA-SB-01-DR-L-320-109.DWG

REFER TO DRAWING SHR-LDA-SB-01-DR-L-320-108

- 3 No. Ajuga reptans 'Alba' 5%
12 No. Anemone hybrida 'Honorine Jobert' 20%
6 No. Astrantia major 'Roma' 10%
6 No. Bergenia 'Bressingham White' 10%
3 No. Epimedium youngianum 'Niveum' 5%
3 No. Galium odoratum 5%
6 No. Helleborus foetidus 10%
3 No. Hosta 'Devon Green' 5%
6 No. Liriope muscari 10%
3 No. Ophiopogon 'Black Beard' 5%
6 No. Primula vulgaris 10%
3 No. Zantedeschia aethiopica 'Crowborough' 5%
- 2 No. Pittosporum tenuifolium 'Tandara Gold'
- 3 No. Sarcococca confusa
- 1 No. Amelanchier lamarkii
- 11 No. Ajuga reptans 'Alba' 5%
43 No. Anemone hybrida 'Honorine Jobert' 20%
22 No. Astrantia major 'Roma' 10%
22 No. Bergenia 'Bressingham White' 10%
11 No. Epimedium youngianum 'Niveum' 5%
11 No. Galium odoratum 5%
22 No. Helleborus foetidus 10%
11 No. Hosta 'Devon Green' 5%
11 No. Ophiopogon 'Black Beard' 5%
22 No. Primula vulgaris 10%
11 No. Zantedeschia aethiopica 'Crowborough' 5%

- 8 No. Ajuga reptans 'Alba' 5%
15 No. Asarum europaeum 10%
15 No. Asplenium scolopendrium 10%
15 No. Brunnera macrophylla 'Jack Frost' 10%
8 No. Digitalis lutea 5%
8 No. Galium odoratum 5%
15 No. Helleborus foetidus 10%
15 No. Hosta 'Devon Green' 10%
8 No. Hosta 'Hadsphen Blue' 5%
8 No. Liriope muscari 5%
15 No. Pachysandra terminalis 10%
15 No. Primula vulgaris 10%
8 No. Tiarella 'Spring Symphony' 5%

1 No. Hamamelis japonica 'Arborea'

2 No. Amelanchier lamarkii

1 No. Hamamelis japonica 'Arborea'

1 No. Cornus kousa

1 No. Magnolia lilliflora 'Susan'

54.8sqm Amenity Lawn:
80% Tall fescue (Festuca arundinacea)
10% Perennial ryegrass (Lolium perenne)
10% Smooth-stalked meadow grass (Poa pratensis)

1 No. Cornus kousa

3 No. Sarcococca confusa

1 No. Aesculus parviflora

1 No. Kalmia latifolia

- 9 No. Ajuga reptans 'Alba' 5%
17 No. Asarum europaeum 10%
17 No. Asplenium scolopendrium 10%
17 No. Brunnera macrophylla 'Jack Frost' 10%
9 No. Digitalis lutea 5%
9 No. Galium odoratum 5%
17 No. Helleborus foetidus 10%
17 No. Hosta 'Devon Green' 10%
9 No. Hosta 'Hadsphen Blue' 5%
9 No. Liriope muscari 5%
17 No. Pachysandra terminalis 10%
17 No. Primula vulgaris 10%
9 No. Tiarella 'Spring Symphony' 5%

3 No. Pittosporum tenuifolium 'Tandara Gold'

1 No. Aesculus parviflora

- 11 No. Ajuga reptans 'Alba' 5%
21 No. Asarum europaeum 10%
21 No. Asplenium scolopendrium 10%
21 No. Brunnera macrophylla 'Jack Frost' 10%
11 No. Digitalis lutea 5%
11 No. Galium odoratum 5%
21 No. Helleborus foetidus 10%
21 No. Hosta 'Devon Green' 10%
11 No. Hosta 'Hadsphen Blue' 5%
11 No. Liriope muscari 5%
21 No. Pachysandra terminalis 10%
21 No. Primula vulgaris 10%
11 No. Tiarella 'Spring Symphony' 5%

- 14 No. Ajuga reptans 'Alba' 5%
28 No. Asarum europaeum 10%
28 No. Asplenium scolopendrium 10%
28 No. Brunnera macrophylla 'Jack Frost' 10%
14 No. Digitalis lutea 5%
14 No. Galium odoratum 5%
28 No. Helleborus foetidus 10%
28 No. Hosta 'Devon Green' 10%
14 No. Hosta 'Hadsphen Blue' 5%
14 No. Liriope muscari 5%
28 No. Pachysandra terminalis 10%
28 No. Primula vulgaris 10%
14 No. Tiarella 'Spring Symphony' 5%

- 26 No. Ajuga reptans 'Alba' 5%
101 No. Anemone hybrida 'Honorine Jobert' 20%
51 No. Astrantia major 'Roma' 10%
51 No. Bergenia 'Bressingham White' 10%
26 No. Epimedium youngianum 'Niveum' 5%
26 No. Galium odoratum 5%
51 No. Helleborus foetidus 10%
26 No. Hosta 'Devon Green' 5%
51 No. Liriope muscari 10%
26 No. Ophiopogon 'Black Beard' 5%
51 No. Primula vulgaris 10%
26 No. Zantedeschia aethiopica 'Crowborough' 5%

- 8 No. Ajuga reptans 'Alba' 5%
31 No. Anemone hybrida 'Honorine Jobert' 20%
16 No. Astrantia major 'Roma' 10%
16 No. Bergenia 'Bressingham White' 10%
8 No. Epimedium youngianum 'Niveum' 5%
8 No. Galium odoratum 5%
16 No. Helleborus foetidus 10%
8 No. Hosta 'Devon Green' 5%
16 No. Liriope muscari 10%
8 No. Ophiopogon 'Black Beard' 5%
16 No. Primula vulgaris 10%
8 No. Zantedeschia aethiopica 'Crowborough' 5%

NOTES

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LEGEND

SOFTWARES

- PROPOSED HERBACEOUS PLANTING
- PAVING TYPE 16: ARTIFICIAL TURF
- PROPOSED TREES
- LAWN

Level 01 Sheet 2 Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
2 No.			1.5-2.0m	Aesculus parviflora	5 x tr. Branched	Counted
3 No.			1.5-2.0m	Amelanchier lamarkii	Multistem; 3 x tr.; 3 or 4 stem	Counted
1 No.			1.5-2.0m	Cornus kousa		Counted
1 No.	90L		2.5-3.0m	Cornus kousa	Single Stem	Counted
2 No.	75-80L		1.5-2.0m	Hamamelis japonica 'Arborea'	Branched	Counted
1 No.	90L		2.5-3.0m	Magnolia lilliflora 'Susan'	Branched; Max height 4m	Counted

Shrubs					
Number	Pot Size	Girth	Height	Species	Specification
2 No.			80-100cm	Kalmia latifolia	Bushy
81 No.	3L			Pachysandra terminalis	
12 No.			100-125cm	Pittosporum tenuifolium 'Tandara Gold'	
12 No.	10L		80-100cm	Sarcococca confusa	

Herbaceous					
Number	Pot Size	Girth	Height	Species	Specification
90 No.	3L			Ajuga reptans 'Alba'	
187 No.	3L			Anemone hybrida 'Honorine Jobert'	
81 No.	3L			Asarum europaeum	
95 No.	3L			Astrantia major 'Roma'	
95 No.	3L			Bergenia 'Bressingham White'	
81 No.	3L			Brunnera macrophylla 'Jack Frost'	
42 No.	3L			Digitalis lutea	
48 No.	3L			Epimedium youngianum 'Niveum'	
90 No.	3L			Galium odoratum	
176 No.	3L			Helleborus foetidus	
129 No.	3L			Hosta 'Devon Green'	
42 No.	3L			Hosta 'Hadsphen Blue'	
137 No.	3L			Liriope muscari	
48 No.	3L			Ophiopogon 'Black Beard'	
176 No.	3L			Primula vulgaris	
42 No.	3L			Tiarella 'Spring Symphony'	
48 No.	3L			Zantedeschia aethiopica 'Crowborough'	

Ferns				
Number	Pot Size	Height	Species	Specification
81 No.	3L		Asplenium scolopendrium	



P01 For Planning
REV. DESCRIPTION
CI 29.05.19
APP. DATE

LDA DESIGN

PROJECT TITLE
STATION HILL READING

DRAWING TITLE
BLOCK E LEVEL 01 DETAIL
SOFTWARES GA -SOUTHERN
TERRACE

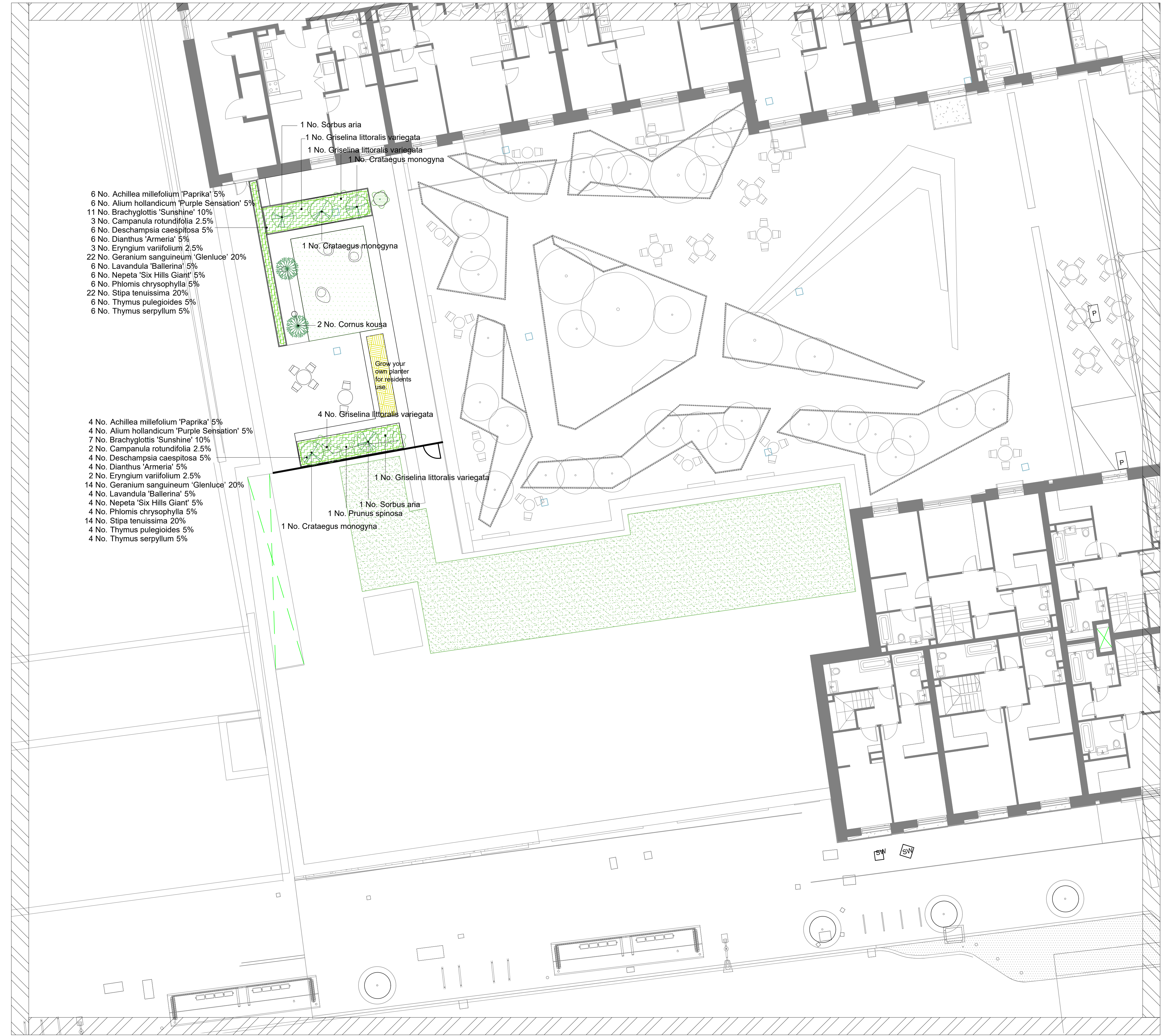
ISSUED BY London T: 020 7467 1470
DATE May 2019 DRAWN ER
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STATUS Planning APPROVED CI

DWG. NO SHR-LDA-SB-01-DR-L-320-109

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LEGEND

SOFTWORKS

- PROPOSED TEMPORARY PLANTING (S278 AREA)
- PROPOSED HERBACEOUS PLANTING
- PAVING TYPE 16: ARTIFICIAL TURF
- PROPOSED TREES
- PROPOSED TREE GRILLES
- SEDUM GREEN ROOF: REFER TO LDA DRAWING SHR-LDA-SB-22-DR-L-500-171
- LAWN

Roof Terraces Sheet 1 Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
3 No.	18L		1.5-2.0m	Crataegus monogyna		Counted
7 No.	25-45L		1.2-1.5 m	Griselinia littoralis variegata	Bushy	Counted
2 No.	10L	6-8cm	1.2-1.5 m	Sorbus aria		Counted

Shrubs						
Number	Pot Size	Girth	Height	Species	Specification	Density
18 No.	3L			Brachyglottis 'Sunshine'	Bushy	9/m ²
2 No.			175-200cm	Cornus kousa	4 x tr. ; Branched	Counted
10 No.	3L			Phlomis chrysophylla		9/m ²
1 No.			150-175cm	Prunus spinosa	3 x tr.	Counted

Herbaceous						
Number	Pot Size	Girth	Height	Species	Specification	Density
10 No.	3L			Achillea millefolium 'Paprika'		9/m ²
10 No.	3L			Dianthus 'Armeria'		9/m ²
5 No.	3L			Eryngium variifolium		9/m ²
36 No.	3L			Geranium sanguineum 'Glenluce'		9/m ²
10 No.				Lavandula 'Ballerina'		9/m ²
10 No.	3L			Nepeta 'Six Hills Giant'		9/m ²
10 No.	3L			Thymus pulegioides		9/m ²
10 No.	3L			Thymus serpyllum		9/m ²

Wildflowers						
Number	Pot Size	Girth	Height	Species	Specification	Density
5 No.	3L			Campanula rotundifolia		9/m ²

Bulbs				Specification	Density
Number	Species				
10 No.	Alium hollandicum 'Purple Sensation'				9/m ²

Grasses					
Number	Pot Size	Height	Species	Specification	Density
10 No.	3L		Deschampsia caespitosa		9/m ²
36 No.	3L		Stipa tenuissima		9/m ²



P01 For Planning

CI 29.05.19

REV. DESCRIPTION

APP. DATE

LDA DESIGN

PROJECT TITLE

STATION HILL READING

DRAWING TITLE

BLOCK E LEVEL 06 DETAIL SOFTWORKS GA - ROOF TERRACE

ISSUED BY

London

T: 020 7467 1470

DATE

May 2019

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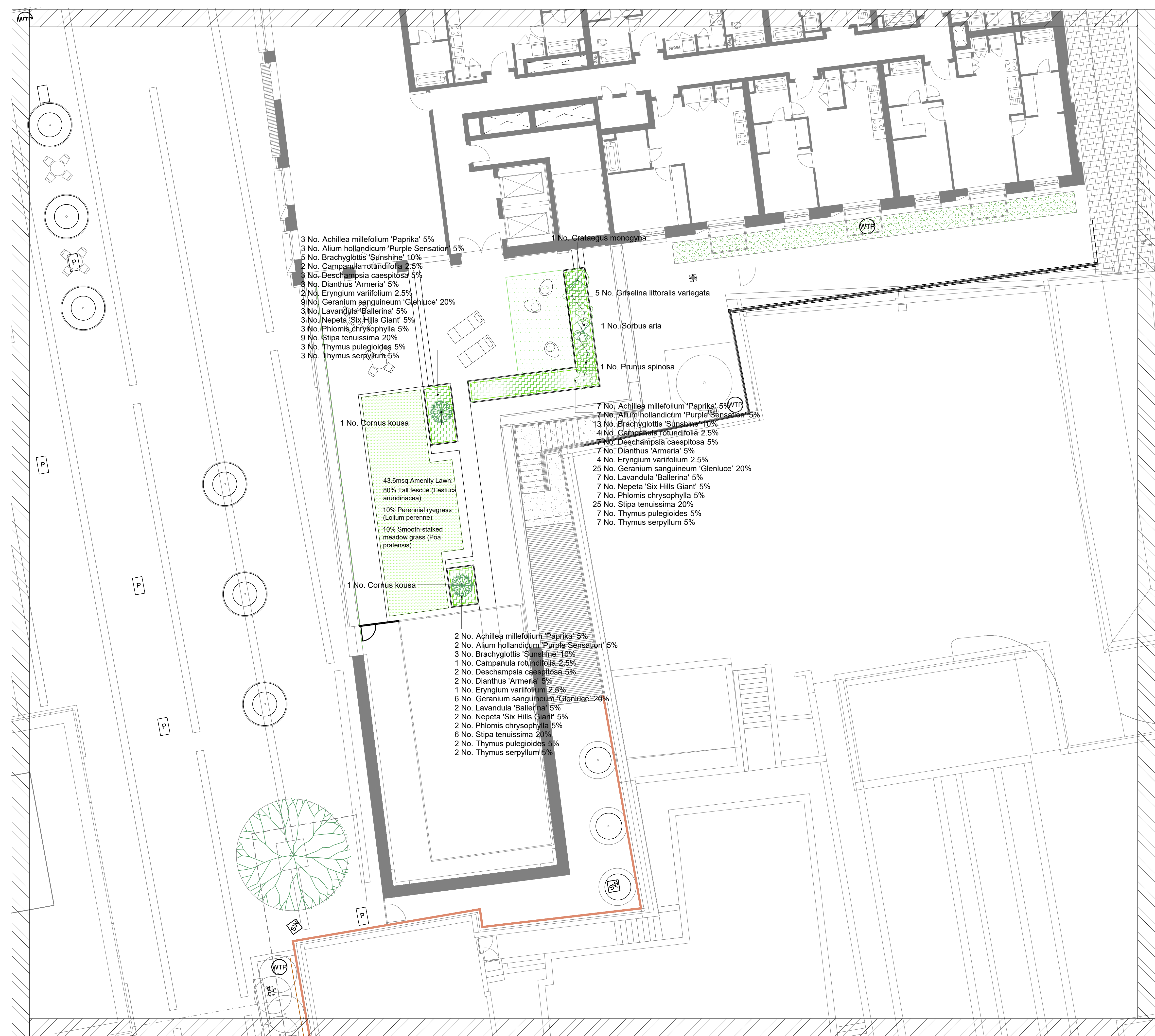
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LEGEND

SOFTWORKS

- PROPOSED TEMPORARY PLANTING (S278 AREA)
- PROPOSED HERBACEOUS PLANTING
- PAVING TYPE 16: ARTIFICIAL TURF
- PROPOSED TREES
- PROPOSED TREE GRILLES
- SEDUM GREEN ROOF: REFER TO LDA DRAWING SHR-LDA-SB-ZZ-DR-L-500-171
- LAWN

Roof Terraces Sheet 2 Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
1 No.	18L		1.5-2.0m	Crataegus monogyna		Counted
5 No.	25-45L		1.2-1.5 m	Griselinia littoralis variegata	Bushy	Counted
1 No.	10L	6-8cm	1.2-1.5 m	Sorbus aria		Counted

Shrubs						
Number	Pot Size	Girth	Height	Species	Specification	Density
21 No.	3L			Brachyglottis 'Sunshine'	Bushy	9/m²
2 No.			175-200cm	Cornus kousa	4 x tr. ; Branched	Counted
12 No.	3L			Phlomis chrysophylla		9/m²
1 No.			150-175cm	Prunus spinosa	3 x tr.	Counted

Herbaceous						
Number	Pot Size	Girth	Height	Species	Specification	Density
12 No.	3L			Achillea millefolium 'Paprika'		9/m²
12 No.	3L			Dianthus 'Armeria'		9/m²
7 No.	3L			Eryngium variifolium		9/m²
40 No.	3L			Geranium sanguineum 'Glenluce'		9/m²
12 No.				Lavandula 'Ballerina'		9/m²
12 No.	3L			Nepeta 'Six Hills Giant'		9/m²
12 No.	3L			Thymus pulegioides		9/m²
12 No.	3L			Thymus serpyllum		9/m²

Wildflowers						
Number	Pot Size	Girth	Height	Species	Specification	Density
7 No.	3L			Campanula rotundifolia		9/m²

Bulbs						
Number	Species				Specification	Density
12 No.	Allium hollandicum 'Purple Sensation'					9/m²

Grasses						
Number	Pot Size	Height	Species		Specification	Density
12 No.	3L		Deschampsia caespitosa			9/m²
40 No.	3L		Stipa tenuissima			9/m²



P01 For Planning CI 29.05.19

REV. DESCRIPTION APP. DATE

LDA DESIGN

PROJECT TITLE

STATION HILL READING

DRAWING TITLE

BLOCK F LEVEL 11 DETAIL

SOFTWORKS GA - ROOF TERRACE

ISSUED BY London T: 020 7467 1470

DATE May 2019 DRAWN ER

SCALE#A1 1:100 CHECKED BE

STATUS Planning APPROVED CI

DWG. NO SHR-LDA-SB-11-DR-L-320-111

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Plot E
4170sqm roof area total

1042sqm green roof
(25%) required

1022 provided
(24.5%)

Plot F
1091sqm roof area total

273sqm green roof
(25%) required

336sqm provided
(27.5%)

P04	FOR INFORMATION	CI	23.05.2019
P03	FOR INFORMATION	CI	11.02.2019
P02	FOR INFORMATION	CI	18.01.2019
P01	FOR INFORMATION	CI	07.12.2018
REV.	DESCRIPTION	APP.	DATE

LD&A DESIGN

PROJECT TITLE
STATION HILL READING

DRAWING TITLE
PLOT E&F GREEN ROOF AREAS

ISSUED BY	London	T: 020 7467 1470
DATE	NOV 2018	DRAWN
SCALE@A1	1:250	CHECKED
STATUS	Planning	APPROVED

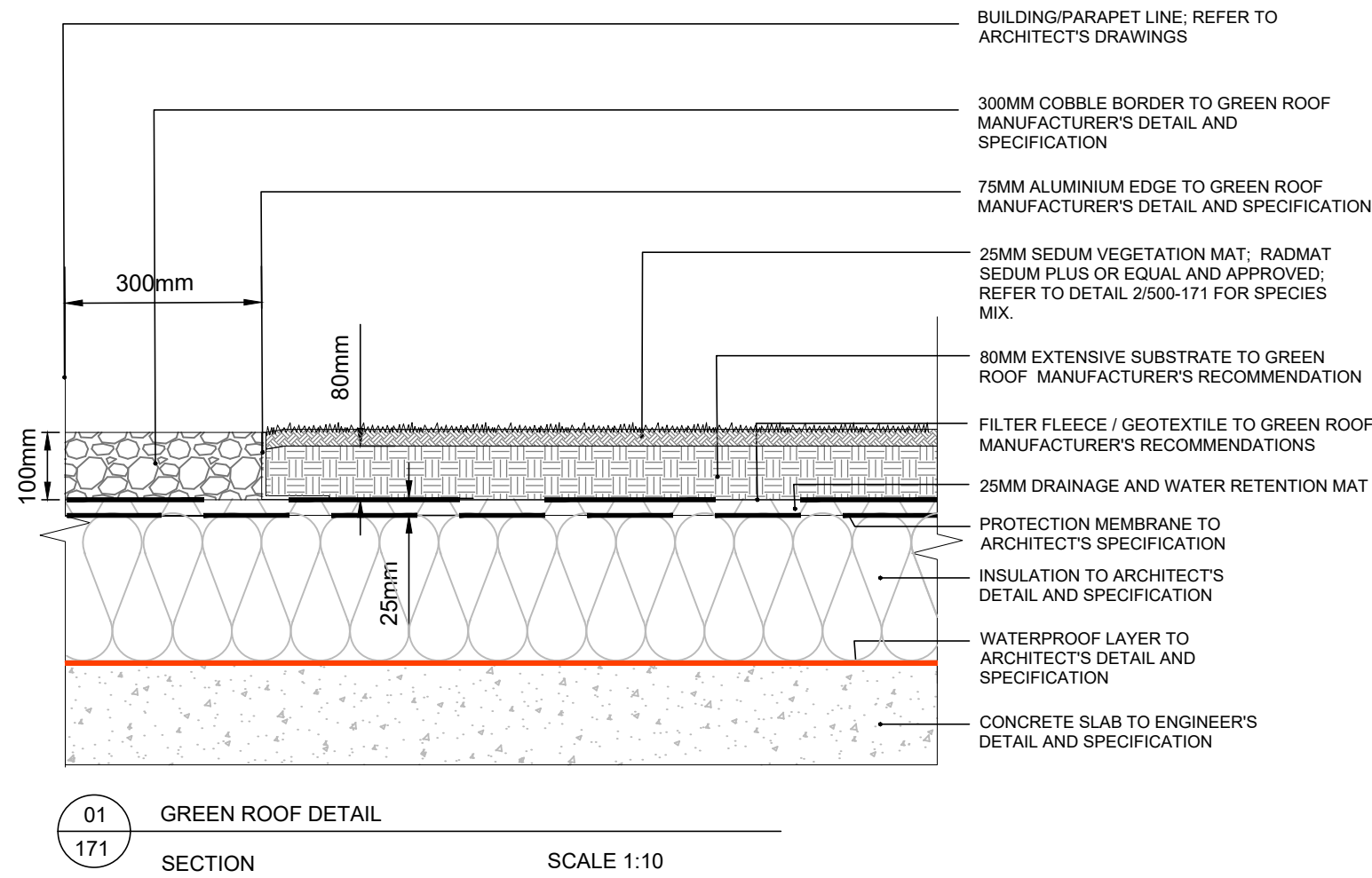
DWG. NO SHR-LDA-SB-ZZ-DR-L-110-130

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Species mix		
Variety	Common name	Description
Sedum Stoloniferum	Stolon Stonecrop	20cm, pink, starshaped flowers, red stems
Sedum Pulchellum	Widow's-cross	10cm, brilliant pink, rich flowering, lush green foliage
Sedum Oreganum	Oregon stonecrop	5cm, yellow, forms cushions, red-brown in sunlight.
Sedum Montanum	Jenny	20cm, golden, dark green needle-like foliage.
Sedum hybridum	Czars Gold	15cm, golden, rich flowering, reddish stems, ever green carpet
Sedum hispanicum	Spanish Stonecrop	10cm, cushion plant, whitish-pink, grey-green cushions.
Sedum Floriferum	Bailey's Gold	10cm, golden, evergreen, crenate foliage.
Sedum Ellacombianum	Selskianum hort	10cm, yellow, unbranched stems and scalloped leaves.
Sedum aizoon	Euphorbioides	40cm, abundant yellow star shaped flowers.
Sedum acre	Oktoberfest	6cm, bright cream-white starflowers, fresh green cushions.
Sedum acre	Yellow	6cm, yellow, mat-forming.
Sedum album	White	10cm, white umbel panicles.
Sedum Spurium	Coccineum	15cm, dark pink flowers.
Sedum Sexangulare	Tasteless Stonecrop	8cm, lemon yellow, dense sweet smelling foliage.
Sedum Reflexum	Crooked Yellow Stonecrop	30cm, yellow flowers with grey leaves.
Sedum telephium	Fabaria	40cm, dense purple-red umbels, dark stemmed, strong blue-green foliage. Attracts bees.

02
171

GREEN ROOF SPECIFICATION

LEGEND



P02	FOR PLANNING	CI	28.05.2019
P01	STAGE 3 ISSUE	CI	04.03.2019
REV.	DESCRIPTION	APP.	DATE

LDA DESIGN

PROJECT TITLE
STATION HILL READING BLOCK E & F

DRAWING TITLE
PLOT E AND F LEVEL 06, 10, 11, 12
GREEN ROOF DETAILS

ISSUED BY	London	T: 020 7467 1470
DATE	February 2019	DRAWN
SCALE@A1	As shown	CHECKED
STATUS	Final	APPROVED

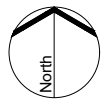
DWG. NO SHR-LDA-SB-ZZ-DR-L-500-171

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Scale as shown





C. Ground Level Planting Plans

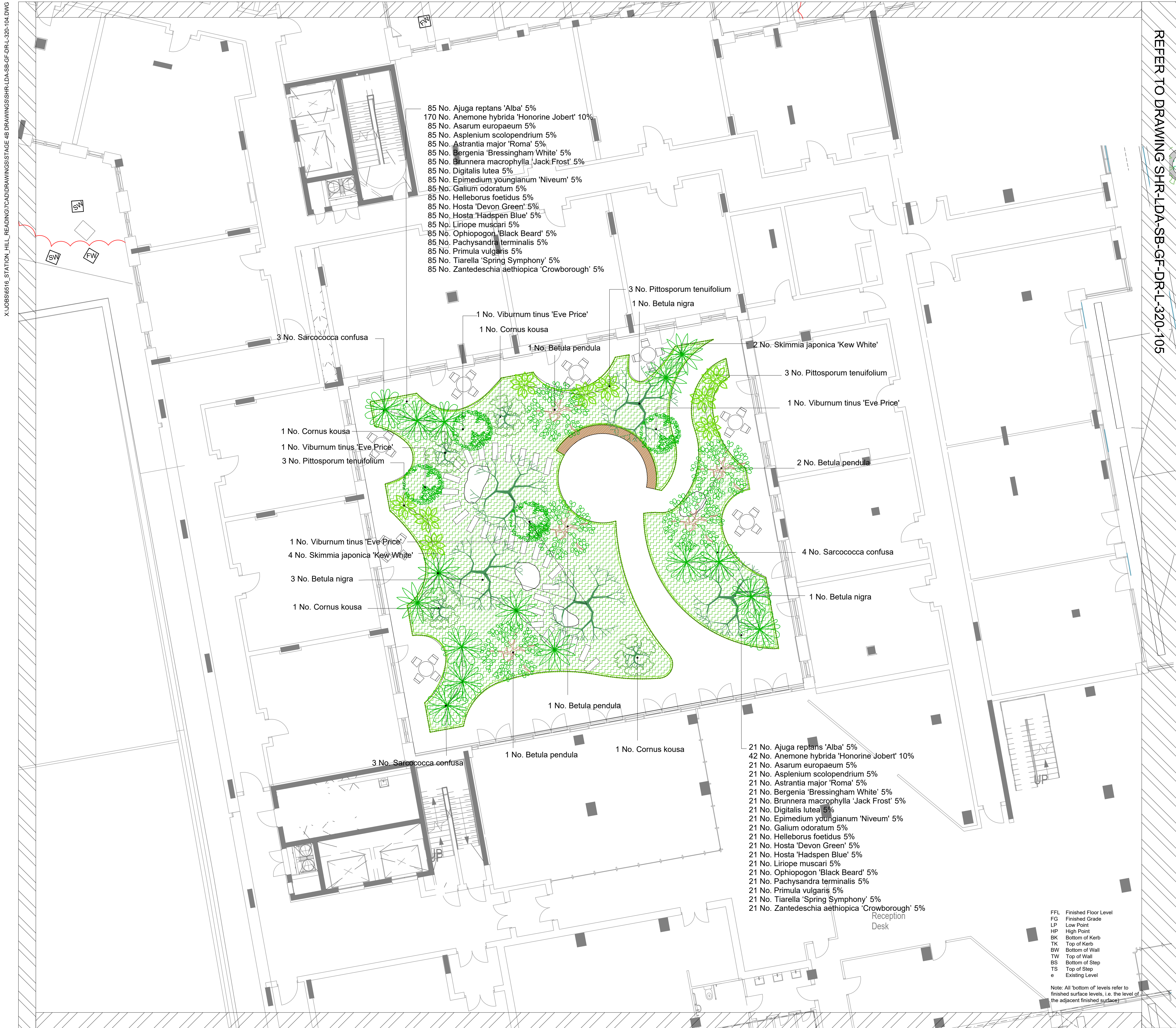
Appendices

Plots E & F, Station Hill, Reading
WIE14788-100
WIE14788-100-R-7-3-1-EMP

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Level 00 Courtyard Schedule

Trees	Number	Pot Size	Girth	Height	Species	Specification	Density
	5 No.	43-80L	14-16cm	450-500cm	Betula nigra		Counted
	5 No.	25-45L		250-300cm	Betula pendula	Multistem; 3 x tr. 3 Stems	Counted

Shrubs

Number	Pot Size	Girth	Height	Species	Specification	Density
4 No.			175-200cm	Cornus kousa	4 x tr. Branched	Counted
106 No.	3L			Pachysandra terminalis		9/m²
9 No.	10L		175-200cm	Pittosporum tenuifolium		Counted
10 No.	10L		125-150cm	Sarcococca confusa		Counted
6 No.	5L		60-80cm	Skimmia japonica 'Kew White'	Bushy	Counted
4 No.	10L		100-125cm	Viburnum tinus 'Eve Price'	Bushy	Counted

Herbaceous

Number	Pot Size	Girth	Height	Species	Specification	Density
106 No.	3L			Ajuga reptans 'Alba'		9/m²
212 No.	3L			Anemone hybrida 'Honorine Jobert'		9/m²
106 No.	3L			Asarum europaeum		9/m²
106 No.	3L			Astrantia major 'Roma'		9/m²
106 No.	3L			Bergenia 'Bressingham White'		9/m²
106 No.	3L			Brunnera macrophylla 'Jack Frost'		9/m²
106 No.	3L			Digitalis lutea		9/m²
106 No.	3L			Epimedium youngianum 'Niveum'		9/m²
106 No.	3L			Galium odoratum		9/m²
106 No.	3L			Helleborus foetidus		9/m²
106 No.	3L			Hosta 'Devon Green'		9/m²
106 No.	3L			Hosta 'Hadsphen Blue'		9/m²
106 No.	3L			Liriope muscari		9/m²
106 No.	3L			Ophiopogon 'Black Beard'		9/m²
106 No.	3L			Primula vulgaris		9/m²
106 No.	3L			Tiarella 'Spring Symphony'		9/m²
106 No.	3L			Zantedeschia aethiopica 'Crowborough'		9/m²

Ferns

Number	Pot Size	Height	Species	Specification	Density
106 No.	3L		Asplenium scolopendrium		9/m²

LEGEND

SOFTWARES

- PROPOSED HERBACEOUS PLANTING
- PROPOSED TREES

REFER TO DRAWING SHR-LDA-SB-GF-DR-L-320-105

P01 For Planning

REV. DESCRIPTION

CI 29.05.19

APP. DATE

LDA DESIGN

PROJECT TITLE

STATION HILL READING

DRAWING TITLE

BLOCK E&F GROUND FLOOR

COURTYWARD LEVEL 00 DETAIL

SOFTWARES GA

ISSUED BY London

DATE May 2019

SCALE@A1 1:100

STATUS Planning

T: 020 7467 1470

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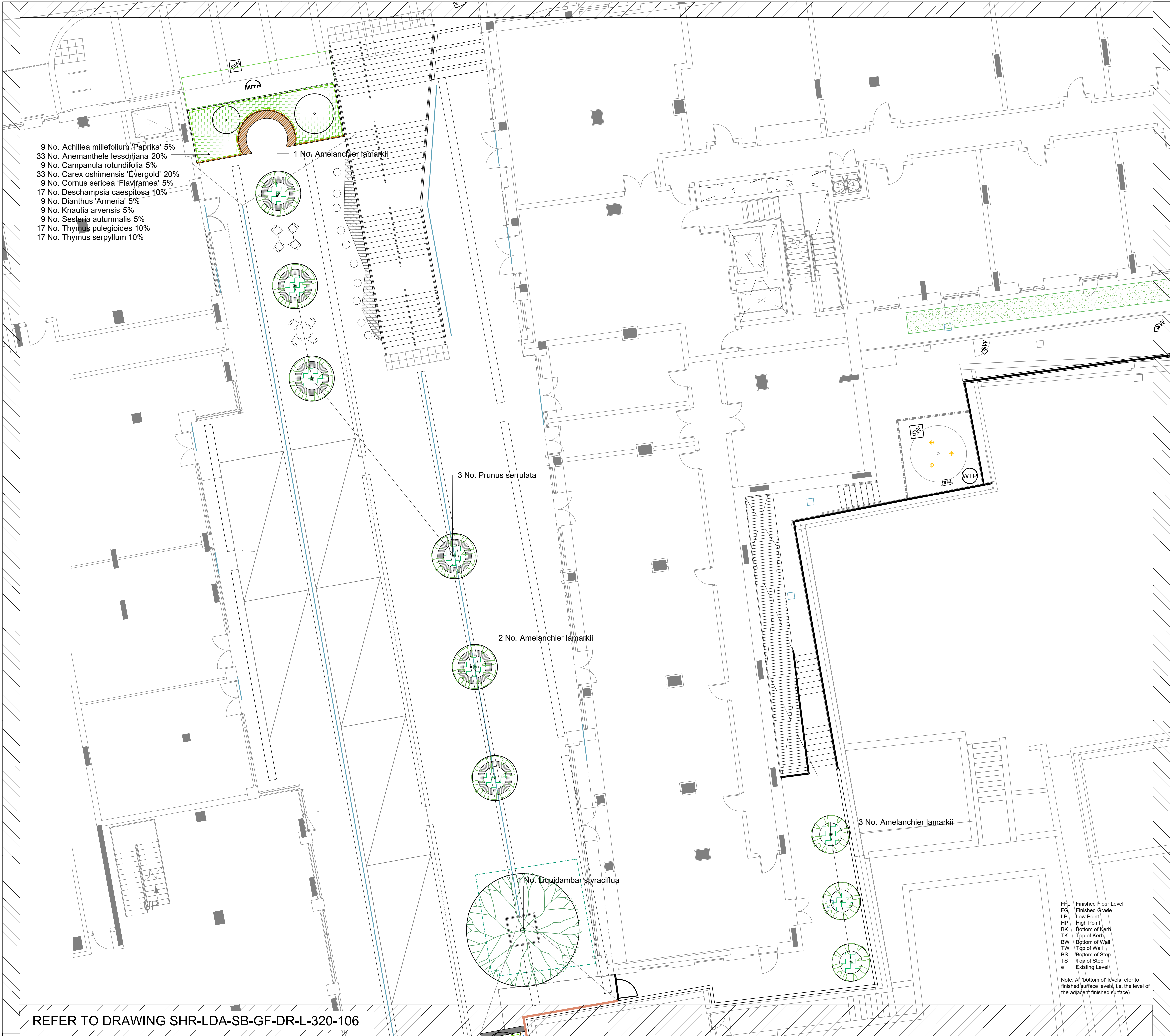
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REFER TO DRAWING SHR-LDA-SB-GF-DR-L-320-106

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LEGEND

SOFTWORKS

- PROPOSED HERBACEOUS PLANTING
- PROPOSED TREES
- PROPOSED TREE GRILLES
- TREE PIT EXTENTS; SILVA CELL EXTENTS IN HARD

Friar's Walk Sheet 1 Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
3 No.			2.5-3.0m	Amelanchier lamarkii	Multistem, 4 x tr.	Counted
3 No.			1.5-2.0m	Amelanchier lamarkii	Multistem 3xtr.	Counted
1 No.	45-50cm			Liquidambar styraciflua	7-8m High; 2m Clear Stem	Counted
3 No.			2.5-3.0m	Prunus serrulata	Multistem	Counted

Friar's Walk Sheet 1 Partial Schedule

Herbaceous						
Number	Pot Size	Girth	Height	Species	Specification	Density
9 No.	3L			Achillea millefolium 'Paprika'		9/m ²
9 No.	3L			Dianthus 'Armeria'		9/m ²
17 No.	3L			Thymus pulegioides		9/m ²
17 No.	3L			Thymus serpyllum		9/m ²

Wildflowers						
Number	Pot Size	Girth	Height	Species	Specification	Density
9 No.	3L			Campanula rotundifolia		9/m ²
9 No.	3L			Knautia arvensis		9/m ²

Grasses					
Number	Pot Size	Height	Species	Specification	Density
33 No.	3L		Anemranthe lessoniana		9/m ²
33 No.	3L		Carex oshimensis 'Evergold'		9/m ²
9 No.	3L		Cornus sericea 'Flaviramea'		9/m ²
17 No.	3L		Deschampsia caespitosa		9/m ²
9 No.	3L		Sesleria autumnalis		9/m ²



P01 For Planning
REV. DESCRIPTION

CI 29.05.19
APP. DATE

LDA DESIGN

PROJECT TITLE
STATION HILL READING

DRAWING TITLE
BLOCK E&F GROUND FLOOR DETAIL
SOFTWORKS GA FRAR'S WALK &
FRIAR'S STREET SHEET 1 OF 3

ISSUED BY London T: 020 7467 1470
DATE May 2019 DRAWN ER
SCALE@A1 1:100 CHECKED BE
STATUS Planning APPROVED CI

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REFER TO DRAWING SHR-LDA-SB-GF-DR-L-320-105

REFER TO DRAWING SHR-LDA-SB-GF-DR-L-320-107

40 No. Betula utilis jacquemontii

- 32 No. Ajuga reptans 'Variegata' 5%
- 64 No. Anemanthele lessoniana 10%
- 32 No. Asplenium scolopendrium 5%
- 64 No. Blechnum spicant 10%
- 95 No. Brunnera macrophylla 'Jack Frost' 15%
- 64 No. Liriope muscari 10%
- 64 No. Luzula nivea 10%
- 64 No. Ophiopogon 'Black Beard' 10%
- 64 No. Polystichum aculeatum 10%
- 95 No. Polystichum setiferum 15%

- FPL Finished Floor Level
- FG Finished Grade
- LP Low Point
- HP High Point
- BK Bottom of Kerb
- TK Top of Kerb
- BW Bottom of Wall
- TW Top of Wall
- BS Bottom of Step
- TS Top of Step
- e Existing Level

Note: All 'bottom of' levels refer to finished surface levels, i.e. the level of the adjacent finished surface)

LEGEND

SOFTWORKS

- PROPOSED HERBACEOUS PLANTING
- PROPOSED TREES
- PROPOSED TREE GRILLES
- TREE PIT EXTENTS; SILVA CELL EXTENTS IN HARD

NOTES

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Friar's Walk Sheet 2 Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
40 No.	150-200L	20-25cm	5.0-6.0m	Betula utilis jacquemontii		Counted

Herbaceous						
Number	Pot Size	Girth	Height	Species	Specification	Density
32 No.	3L			Ajuga reptans 'Variegata'		9/m ²
95 No.	3L			Brunnera macrophylla 'Jack Frost'		9/m ²
64 No.	3L			Liriope muscari		9/m ²
64 No.	3L			Luzula nivea		9/m ²
64 No.	3L			Ophiopogon 'Black Beard'		9/m ²

Ferns					
Number	Pot Size	Height	Species	Specification	Density
32 No.	3L		Asplenium scolopendrium		9/m ²
64 No.	3L		Blechnum spicant		9/m ²
64 No.	3L		Polystichum aculeatum		9/m ²
95 No.	3L		Polystichum setiferum		9/m ²

Grasses					
Number	Pot Size	Height	Species	Specification	Density
64 No.	3L		Anemanthele lessoniana		9/m ²

Frair's Street Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
4 No.			2.5-3.0m	Pyrus calleryana	Multistem; 3 x tr.; 3 to 4 stems	Counted



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CI 29.05.19
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PROJECT TITLE
STATION HILL READING

DRAWING TITLE
BLOCK E&F GROUND FLOOR DETAIL
SOFTWORKS GA FRAR'S WALK &
FRIAR'S STREET SHEET 2 OF 3

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DATE May 2019 DRAWN ER
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Frair's Street Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
4 No.			2.5-3.0m	Pyrus calleryana	Multistem; 3 x tr.; 3 to 4 stems	Counted

LEGEND

SOFTWARES

 PROPOSED HERBACEOUS PLANTING

 PROPOSED TREES

 PROPOSED TREE GRILLES

 TREE PIT EXTENTS; SILVA CELL EXTENTS IN HARD



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PROJECT TITLE
STATION HILL READING

DRAWING TITLE
BLOCK E&F GROUND FLOOR DETAIL
SOFTWORKS GA FRAR'S WALK &
FRIAR'S STREET SHEET 3 OF 3

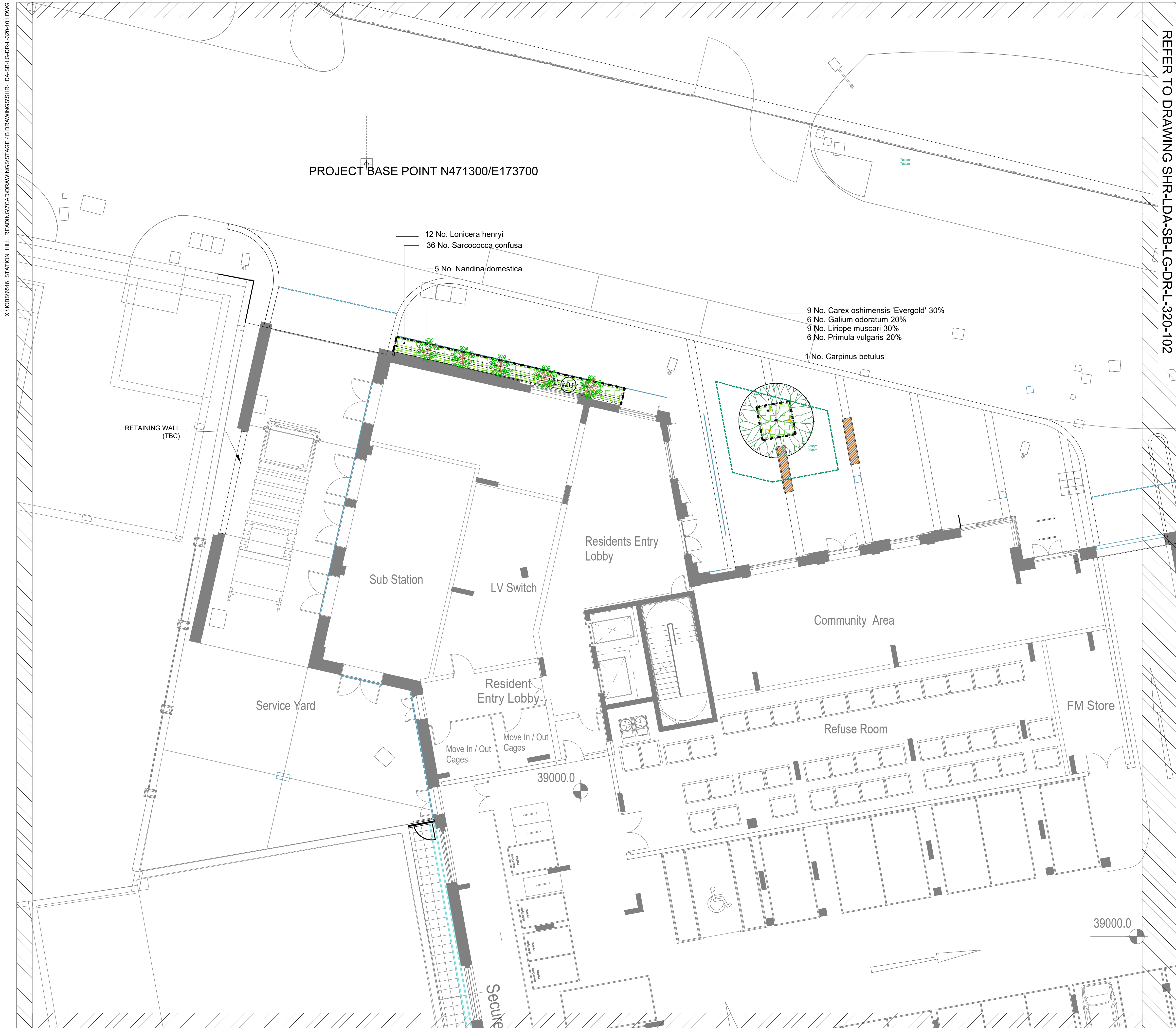
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LEGEND

SOFTWORKS

- PROPOSED HERBACEOUS PLANTING
- PROPOSED TREES
- PROPOSED TREE GRILLES
- TREE PIT EXTENTS: SILVA CELL EXTENTS IN HARD

Garrard Street Sheet 1 Schedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
1 No.	150-200L	40-45cm	5.0-6.0m	Carpinus betulus	2m Clear Stem	Counted

Shrubs						
Number	Pot Size	Girth	Height	Species	Specification	Density
5 No.	3L			Nandina domestica		Counted
36 No.	5L			Sarcococca confusa		5/m ²

Herbaceous						
Number	Pot Size	Girth	Height	Species	Specification	Density
6 No.	3L			Galium odoratum		9/m ²
9 No.	3L			Liriope muscari		9/m ²
6 No.	3L			Primula vulgaris		9/m ²

Climbers						
Number	Pot Size	Girth	Height	Species	Specification	Density
12 No.	3L		100-150cm	Lonicera henryi		3/m ²

Grasses						
Number	Pot Size	Height	Species	Specification	Density	
9 No.	3L		Carex oshimensis 'Evergold'		9/m ²	



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BLOCK E&F LOWER GROUND FLOOR
DETAIL SOFTWORKS GA GARRARD
STREET SHEET 1 OF 3

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LEGEND

SOFTWORKS

- PROPOSED HERBACEOUS PLANTING
- PROPOSED TREES
- PROPOSED TREE GRILLES
- TREE PIT EXTENTS: SILVA CELL EXTENTS IN HARD

Garrard Street Sheet 2 Schedule

Shrubs		Pot Size		Girth	Height	Species	Specification	Density
3 No.	3L					Nandina domestica		Counted
58 No.	5L					Sarcococca confusa		5/m²

Herbaceous		Pot Size		Girth	Height	Species	Specification	Density
9 No.	3L					Galium odoratum		9/m²
14 No.	3L					Liriope muscari		9/m²
9 No.	3L					Primula vulgaris		9/m²

Climbers		Pot Size		Girth	Height	Species	Specification	Density
7 No.	3L				100-150cm	Lonicera henryi		3/m²

Grasses		Pot Size		Height	Species	Specification	Density
14 No.	3L				Carex oshimensis 'Evergold'		9/m²



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STREET SHEET 2 OF 3

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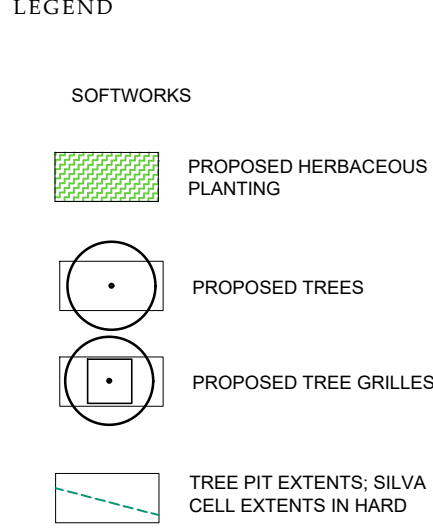
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Garrard Street Sheet 3 Shedule

Trees						
Number	Pot Size	Girth	Height	Species	Specification	Density
1 No.	43-80L	14-16cm	4.0-5.0m	Malus 'Evereste'	2m Clear Stem	Counted
3 No.			2.5-3.0m	Pyrus calleryana	Multistem; 3 x tr.;	3 to 4 stems Counted

Herbaceous						
Number	Pot Size	Girth	Height	Species	Specification	Density
30 No.	3L			Galium odoratum		9/m ²
45 No.	3L			Liriope muscari		9/m ²
30 No.	3L			Primula vulgaris		9/m ²

Grasses						
Number	Pot Size	Height	Species	Specification	Density	
45 No.	3L		Carex oshimensis 'Evergold'		9/m ²	



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BLOCK E&F LOWER GROUND FLOOR
DETAIL SOFTWARES GA GARRARD
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