Pegasus Planning Group

Kier Venture Ltd and Miller Homes Ltd

# Phase 2b SANG (Holme Park)

## Hard & Soft Landscape Specification (For Tender)

Rev A

23-07-2025

Phase 2b SANG (Holme Park) NBS Soft Landscape Specification (for Tender)

# Contents

# D20
# Excavating and filling

## Generally/the site

### 110 Site investigation

1. Report: To be read in conjunction with ground investigation reports.

### 111 General Site Soils

1. Soil removal, handling and re-use to be carried out in accordance with the Soil Resource Survey, BS 3882, BS 8601 and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA, 2009.
    1.1. A Soil Scientist will oversee soil handling, amelioration and placement in accordance with Soil Resource Survey, BS 3882, BS 8601 and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA, 2009.

### 145 Variations in ground water level

1. Give notice: If levels encountered are significantly different from levels in the site investigation report or previously measured.

## Clearance/excavating

### 164 Tree roots

1. Protected area: Do not cut roots within precautionary protection area.
    1.1. Size of area: As shown on Detailed Soft Landscape Proposals drawing (P19-0052_09) / tree protection drawing
2. Excavation in protected area
    2.1. Method: Any tree works and root cutting to be carried out as per arboriculturists guidance and recommendations and be in accordance with the Arboricultural Methodology Report
    2.2. Backfill as soon as possible or temporarily line with polyethylene sheet to reduce evaporation.
3. Outside protected area: Give notice of roots exceeding 25 mm and do not cut without approval.
4. Cutting
    4.1. Make clean smooth cuts with no ragged edges.
    4.2. Pare cut surfaces smooth with a sharp knife.
    4.3. Treatment of cut roots: Not required
5. Backfill: As dug material, enriched with amelioration as section Q31

### 168 Site clearance

1. Timing: Before topsoil stripping, if any.
2. General: Clear site of rubbish, debris and vegetation. Do not compact topsoil.
3. Treatment: Apply a suitable non-residual herbicide to areas to receive planting

## 170 Removing small trees, shrubs, hedges and roots

1. Identification: Clearly mark trees to be removed.
2. Small trees, shrubs and hedges: Cut down.
3. Roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
4. Safety: Comply with Forest Industry Safety Accord safety leaflets.

## 175 Felling large trees

1. Definition: Girth over 600 mm.
2. Identification: Clearly mark trees to be removed.
3. Safety: Comply with Forest Industry Safety Accord safety leaflets.
4. Felling: As close to the ground as possible.
5. Stumps: Remove by stump grinding
6. Work near retained trees: Take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained, where tree canopies overlap and in confined spaces generally.

## 180 Chipping and shredding

1. General: Permitted, store arisings on site and spread arisings in areas of proposed native planting as mulch once planted.

## 220 Stripping topsoil

1. General: Before beginning general excavation or filling, strip topsoil from areas where there will be regrading, buildings, pavings/ roads and other areas shown on drawings.
   All soil stripping and storage to be compliant with the Soil Resource Survey. Soil scientist to oversee stripping of topsoil.
2. Depth
   2.1. Remove to an average depth of 200 mm.
   2.2. Give notice where the depth of topsoil is difficult to determine.
   2.3. Note:: Soil scientist to oversee stripping of topsoil.
3. Handling: Handle topsoil for reuse or sale in accordance with clause 225.
4. Around trees: Do not remove topsoil from below the spread and root protection area of trees to be retained.
5. Site storage: Keep separate from excavated sub-soil in locations agreed with the contract administrator as per clause 410.

## 221 Treating topsoil

1. Treatment: Apply a suitable translocated nonresidual herbicide.
2. Timing: Not less than two weeks before excavating topsoil.

## 225 Handling topsoil

1. Standard: To BS 3882 specifically Annex A, Soil Resource Survey, and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA, 2009.
2. Aggressive weeds

2.1. Species: Notify the presence of species included in the Weeds Act, section 2, or the appropriate Wildlife and Countryside Act for the relevant jurisdiction.

2.2. Give notice: Obtain instructions before moving topsoil.

3. Contamination: Do not mix topsoil with:

3.1. Subsoil, stone, hardcore, rubbish or material from demolition work.

3.2. Other soil or material containing aggressive weeds, sharps, plastics and non soil forming materials and notifiable animal or plant diseases.

3.3. Oil, fuel, cement or other substances harmful to plant growth.

3.4. Other classifications of topsoil.

4. Multiple handling: Keep to a minimum. Use topsoil immediately after stripping.

### 242 Excavations adjacent to existing backfilled trenches

1. Proximity: When width of undisturbed ground between the two excavations will be less than 900mm.
2. Action: Assume that the ground between the trenches is unstable and provide side support accordingly.

### 250 Permissible deviations from formation levels

1. Beneath mass concrete foundations: ±25 mm. To be confirmed by structural engineers.
2. Beneath ground bearing slabs and r.c. foundations: ±15 mm.
3. Embankments and cuttings: ±50 mm.
4. Ground abutting external walls: ±50 mm, but such as to ensure that finished level is not less than 150 mm below dpc.

## Disposal of materials

### 410 Excavated topsoil storage

1. Storage: Stockpile in temporary storage heaps location to be agreed with contract administrator .

### 420 Topsoil storage heaps

1. Location: As agreed
2. Standard: To BS 3882 specifically Annex A, Soil Resource Survey, and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA, 2009.
3. Height (maximum): 2m
4. Protection

4.1. Do not place any other material on top of storage heaps.

4.2. Do not allow construction plant to pass over storage heaps.

4.3. Prevent compaction and contamination.

### 421 Topsoil storage heap treatment

1. Treatment: Apply a suitable herbicide at appropriate times to prevent seeding of weeds

### 441 Surplus subsoil

1. Standard:: To be handled as per BS 8601, the Soil Resource Survey, and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA, 2009.
2. Excavated material: Stockpile in temporary storage heaps.
3. Retained material: Spread and level surplus subsoil on site. Handle as per the Soil Resource Survey
    3.1. Locations: to be agreed
    3.2. Protected areas: Do not raise soil level within root spread and root protection areas of trees that are to be retained.
4. Remaining material: Move to storage location within the wider site in accordance with the Materials Management Strategy.

### 450 Water

1. Generally: Keep all excavations free from water until:
    1.1. Formations are covered.
    1.2. Below ground constructions are completed.
    1.3. Basement structures and retaining walls are able to resist leakage, water pressure and flotation.
2. Drainage: Form surfaces of excavations and fill to provide adequate falls.
3. Removal of water: Provide temporary drains, sumps and pumping as necessary. Do not pollute watercourses with silt laden water.

### 454 Ground water level, spring or running water

1. Give notice: If it is considered that the excavations are below the water table.
2. Springs/ Running water: Give notice immediately if encountered.

### 457 Pumping

1. General: Do not disturb excavated faces or stability of adjacent ground or structures.
2. Pumped water: Discharge without flooding the site or adjoining property.
3. Sumps: Construct clear of excavations. Fill on completion.
    3.1. Locations: Submit proposals

### 460 Permanent drainage system

1. Disposal of water from the excavations through system: Not permitted

## Filling

### 500 Proposed fill materials

1. Details: Submit full details of proposed fill materials to demonstrate compliance with specification, including:
    1.1. Type and source of imported fill.
    1.2. Proposals for processing and reuse of material excavated on site.
    1.3. Test reports as required elsewhere.

2. Timing: At least 21 days before starting filling

## 510 Hazardous, aggressive or unstable materials

1. General: Do not use fill materials which would, either in themselves or in combination with other materials or ground water, give rise to a health hazard, damage to building structures or instability in the filling, including material that is:
   1.1. Frozen or containing ice.
   1.2. Organic.
   1.3. Contaminated or noxious.
   1.4. Susceptible to spontaneous combustion.
   1.5. Likely to erode or decay and cause voids.
   1.6. With excessive moisture content, slurry, mud or from marshes or bogs.
   1.7. Clay of liquid limit exceeding 80 and/or plasticity index exceeding 55.
   1.8. Unacceptable, class U2 as defined in the 'Specification for highway works', clause 601.

## 520 Frost susceptibility

1. General: Except as allowed below, fill must be non frost-susceptible as defined in the 'Specification for highway works', clause 801.8.
2. Test reports: If the following fill materials are proposed, submit a laboratory report confirming they are non frost- susceptible:
   2.1. Fine grained soil with a plasticity index less than 20%.
   2.2. Coarse grained soil or crushed granite with more than 10% retained on a 0.063 mm sieve.
   2.3. Crushed chalk.
   2.4. Crushed limestone fill with average saturation moisture content in excess of 3%.
   2.5. Burnt colliery shale.
3. Frost-susceptible fill: May only be used:
   3.1. At depths below the finished ground surface greater than: 600mm
   3.2. Within the external walls of buildings below spaces that will be heated. Protect from frost during construction.
   3.3. Where frost heave will not affect structural elements.

## 525 Testing of suitability of fill materials before start of filling

1. Laboratory: UKAS accredited laboratory
2. Submit report to: Civil Engineer (two copies)
   2.1. Timing: 21 days before starting filling
3. Samples: Deliver to laboratory as required.
   3.1. Additional requirements: None
4. Tests: As directed
5. Frequency: Submit with tender proposed rate and frequency of testing to demonstrate continuing compliance of imported or reprocessed fill with specified properties

## 530 Placing fill

1. Surfaces of excavations and areas to be filled: Free from loose soil, topsoil, organic material, rubbish and standing water.
2. Freezing conditions: Do not place fill on frozen surfaces. Remove material affected by frost. Replace and recompact if not damaged after thawing.
3. Adjacent structures, membranes and buried services:
   3.1. Do not overload, destabilise or damage.
   3.2. Submit proposals for temporary support necessary to ensure stability during filling.
   3.3. Allow 14 days (minimum) before backfilling against in situ concrete structures.
4. Layers: Place so that only one type of material occurs in each layer.
5. Earthmoving equipment: Vary route to avoid rutting.

## 535 Compaction generally

1. General: Compact fill not specified to be left loose as soon as possible after placing.
2. After compaction: Surface of each layer must be well closed, showing no movement under compaction plant, and without cracks, holes, ridges, loose material and the like.
3. Defective areas: Remove and recompact to full thickness of layer using new material.

## 540 Benching in fill

1. Adjacent areas: If, during filling the difference in level between adjacent areas of filling exceeds 600 mm, cut into edge of higher filling to form benches 600 mm minimum width and height equivalent to depth of a layer of compacted filling.
2. New filling: Spread and compact to ensure maximum continuity with previous filling.

## 610 Compacted filling for landscape areas

1. Fill: Material capable of compaction by light earthmoving plant.
2. Filling: Layers not more than 200 mm thick. Lightly compact each layer to produce a stable soil structure.

## 615 Loose tip filling for landscape areas

1. Filling: Do not firm, consolidate or compact when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

## Bioremediation - Not Used

## 'specification for highway works: earthworks specification' appendices - Not Used

Ω End of Section

# Q23
# Gravel/ hoggin/ woodchip/ resin bound roads/ pavings/ overlays

## Types of surfacing

### 110A Self binding gravel - To formal circular route

1. Description : 2m wide footpath with timber edging
2. Manufacturer: Breedon Group (or similar)
   2.1. Web: https://www.breedongroup.com/products-and-services/gb/our-products/special-aggregates/breedon-golden-amber-gravel
   2.2. Telephone: 01332 694001
3. Product reference: Reference: Breedon Golden Amber Gravel
4. Edging: Treated timber edging (as per clause 310)
5. Geotextile: Terram 1000
6. Granular sub-base: 150mm free draining DoT Type 1
7. Surface course: Angular self binding gold footpath gravel laid to 65mm
   7.1. Compacted thickness: 50mm
8. Completion: Compact to produce a firm, regular surface, stable in use.
9. Laying: Please refer to suppliers specification and details for laying and implementation guidance.

### 110B Self binding gravel - To informal surfaced footpath

1. Description : 1.5m wide footpath without edging
2. Manufacturer: Breedon Group (or similar)
   2.1. Web: https://www.breedongroup.com/products-and-services/gb/our-products/special-aggregates/breedon-golden-amber-gravel
   2.2. Telephone: 01332 694001
3. Product reference: Reference: Breedon Golden Amber Gravel
4. Edging: No edging
5. Geotextile: Terram 1000
6. Granular sub-base: 150mm free draining DoT Type 1
7. Surface course: Angular self binding gold footpath gravel laid to 65mm
   7.1. Compacted thickness: 50mm
8. Completion: Compact to produce a firm, regular surface, stable in use.
9. Laying: Please refer to suppliers specification and details for laying and implementation guidance.

### 110C Self binding gravel - To routes through woodland/RPAs

1. Description : 2 / 2.5m wide footpath timber edging - to be constructed as 'no-dig' construction method, laying all materials on top of existing ground levels where within RPAs

2. Manufacturer: Breedon Group (or similar)
    2.1. Web: https://www.breedongroup.com/products-and-services/gb/our-products/special-aggregates/breedon-golden-amber-gravel
    2.2. Telephone: 01332 694001
3. Product reference: Reference: Breedon Golden Amber Gravel
4. Edging: Treated timber edging (as per clause 310)
5. Geotextile: Terram 1000
6. Granular sub-base: 150mm free draining DoT Type 1, laid within CellWeb (75mm depth where pedestrian access only; 100mm depth where combined maintenance vehicular access)
7. Surface course: Angular self binding gold footpath gravel laid to 65mm
    7.1. Compacted thickness: 40mm
8. Completion: Compact to produce a firm, regular surface, stable in use.
9. Laying: Please refer to suppliers specification and details for laying and implementation guidance.

## 160 Loose gravel - To dog beach areas

1. Description: Locally sourced gravel
2. Geotextile: To be installed beneath sub-base layer to full extent of gravel surfacing
    2.1. Manufacturer: Terram
        2.1.1. Product reference: Terram 1000
3. Granular sub-base: MoT Type 1
    3.1. Compacted thickness: min.100mm
4. Gravel: Loose laid and raked to uniform thickness.
    4.1. Type: Locally sourced - contractor to supply landscape architect with sample for approval
    4.2. Source: Locally sourced
    4.3. Colour: Contractor to supply landscape architect with sample for approval
    4.4. Size: 10-20mm
    4.5. Thickness: min. 40mm

## 281 Natural Boulders - Large / Feature - to LLAP

1. Description: Large boulders within LLAP, selected hard smooth, rounded beach or river stones. To be naturally rounded with no sharp corners.
2. Location: Refer to drawing - TBC.
3. Size: 500-1000mm
4. Source: CED Ltd (or similar approved)
    4.1. Product Reference: Mixed glacial boulders

# Laying

## 310 Timber edging

1. Softwood board

1.1. Size: 150 x 38 mm.

1.2. Fixing: Galvanized nails into softwood pegs.

2. Softwood pegs

2.1. Size: 50 x 50 x 450 mm long

2.2. Fixing: Drive into ground.

2.3. Centres: 1200 mm

3. Preservative treatment: 25 year desired life expectancy

## 315 Materials

1. Compatibility: Chippings suitable for use with respective binders/ emulsions/ resin/ epoxy.

## 320 Samples

1. Submit: Representative samples of chippings for hard binding gravel and boulders.

## 325 Blinding to sub-base

1. Type: 25 year desired life expectancy
2. Laying: Compact. Seal interstices. Provide free drainage.
3. Compacted thickness: 20 mm

## 330 Herbicide to paving Q23/

1. Description: Prior to laying self binding gravel
2. Type: Suitable for the application, location and conditions of use.
3. Weeds and moss: Grub up.
4. Application: Before surfacing as per manufacturers recommendations.

## 340 Laying generally

1. Channels, gullies, etc: Keep clear.
2. Finished surfaces

2.1. Lines and levels: To prevent ponding.

2.2. Overall texture: Even.

2.3. State at completion: Clean.

## 350 Cold weather working

1. Frozen materials: Do not use.
2. Freezing conditions: Do not lay pavings.
3. Cold bituminous surface dressings: Do not apply when ambient temperature is below 10°C.
4. Other dressings or overlays: As manufacturers' recommendations.

## 360 Drainage falls

1. Sealed surfaces

1.1. Falls and cross falls (minimum): 1:40.

1.2. Camber (minimum): 1:50.

2. Unsealed surfaces (minimum): 1:30.

## 380 Laying granular surfaces in pedestrian areas

1. Permissible deviation from required levels, falls and cambers (maximum): ±12 mm.
2. General: Spread and level in 100 mm maximum layers. As soon as possible, compact each layer.
3. Dry weather: Lightly water layers during compaction.

## 390 Protection from traffic and plant

1. Paved areas: Restrict access to prevent damage.

## Completion - Not Used

Ω End of Section

# Q26
# Special surfacings/ pavings for sport/ general amenity

## Sports surfacing - Not Used

## Impact attenuating surfacings for play areas

### 301 Extent of impact attenuating surfacing

1. General: Lay impact attenuating surfacing as indicated on drawing P19-0052_10, as per manufacturer's safety impact zone for each play equipment item.

### 310 Bark surfacing

1. Granular sub-base: To manufacturers recommendations
    1.1. Thickness: To manufacturers recommendations
2. Geotextile membrane
    2.1. Manufacturer: Terram (or similar)
        2.1.1. Product reference: Terram 2000
3. Surface course: Playground Bark
    3.1. Supplier: PlaySafe (or similar)
        3.1.1. Product reference: PlaySafe Playground Bark
    3.2. Grade: Playground grade bark free from dust, pests, disease, weeds, coarse angular fragments and sharp pieces.
    3.3. Nominal particle size: 20-80 mm, well graded.
    3.4. Depth (minimum): Min 75mm (as per play equipment impact fall zone specification)
4. Submit
    4.1. Ease of ignition: Evidence of testing to BS 7188.
    4.2. Critical fall height: Evidence of testing to BS EN 1177.

### 330 Sand surfacing

1. Granular sub-base: To manufacturers recommendations
    1.1. Thickness: To manufacturers recommendations
2. Geotextile membrane
    2.1. Manufacturer: Terram (or similar)
        2.1.1. Product reference: Terram 2000
3. Surface course
    3.1. Supplier: Aggregates Direct (or similar approved)
        3.1.1. Product reference: Childrens Play Area Sand
    3.2. Grade: Playground grade, clean washed silica sand of smooth rounded particles.
    3.3. Artificially crushed material: Not permitted.
    3.4. Nominal size: 0.25-1.5 mm.
    3.5. Depth (minimum): Min 75mm (as per play equipment impact fall zone specification)
4. Submit

4.1. Critical fall height: Evidence of testing to BS EN 1177.

## Associated accessories - Not Used

## Execution - Not Used

## Completion

### 920 Play surface testing

1. Standard: To BS EN 1177 and BS 7188, where applicable.
2. Testing body: A United Kingdom Accreditation Service (UKAS) independent laboratory.
3. Timing: Within ten days of completing the surfacing works.
4. Test results: Submit.

### 930 Documentation

1. Standard: To BS EN 1176-1.
2. Submission requirements
   - 2.1. Name and contact details of installer.
   - 2.2. Date of installation.
   - 2.3. Name and contact details of manufacturer.
   - 2.4. Type/ description/ reference of products used.
   - 2.5. Manufacturer's recommended inspection and maintenance procedures to maintain safety and impact attenuating performance.
3. Manufacturer's recommended cleaning and maintenance methods, where relevant.

Ω End of Section

# Q28
# Topsoil and soil ameliorants

## System outline

### 114 General

1. Site visit required to be undertaken by Landscape Architect to check and approve final contours completed by groundworkers. Purpose of site visit is to ensure contours are satisfactory and to ensure suitable ripping / smoothing of subsoil is satisfactory before importation / application of topsoil. Engineer and landscape contractor required to attend. If required, a top survey is to be undertaken of the finished levels as instructed by the Engineer / Landscape Architect to confirm contours and levels are as designed. Any works following the site visit as advised by Engineer / Landscape Architect are to be completed prior to application of topsoil and planting, and signed off by the Landscape Architect and Engineer where appropriate.
    1.1. Give notice: 2 weeks.
2. All subsoil and topsoil handling to be completed in accordance with:
    - the Soils Resource Survey,
    - to BS 3882,
    - the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA (2009);

### 115 Soil system for grass swards - to amenity grass areas

1. Composition
    1.1. Soil: In line with Soil Resource Survey: Site sourced topsoil if suitable
    1.2. Ameliorants: Fertilizer to be incorporated into topsoil
    1.3. Accessories: None

### 116 Soil system for grass swards - to wildflower grassland areas

1. Composition
    1.1. Soil: Site sourced topsoil
    1.2. Ameliorants: None
    1.3. Accessories: None

### 118 Soil system for grass swards - to long mown grass areas

1. Composition
    1.1. Soil: Imported topsoil to BS 3882
    1.2. Ameliorants: None
    1.3. Accessories: None

### 119 Soil system for grass swards - to flowering lawn areas

1. Composition
    1.1. Soil: Imported topsoil to BS 3882
    1.2. Ameliorants: None

1.3. Accessories: None

### 135 Planting bed soil system

1. Composition
   1.1. Topsoil: In line with Soil Resource Survey: Site sourced topsoil if suitable
   1.2. Ameliorants: Organic materials and fertiliser
   1.3. Accessories: None

### 145 Plant pit backfilling soil system - For tree pits

1. Composition
   1.1. Topsoil: In line with Soil Resource Survey: Site sourced topsoil if suitable
   1.2. Ameliorants: Fertilizer and tree planting and mulching compost
   1.3. Accessories: None

### 155 Mulching and top dressing system

1. Description: For tree pits and planting beds
2. Composition
   2.1. Material: Composted bark mulch

## Products

### 300 Preparation materials generally

1. Purity: Free of pests and disease.
2. Foreign matter: On visual inspection, free of fragments and roots of aggressive weeds, sticks, straw, subsoil, pieces of brick, concrete, glass, wire, large lumps of clay or vegetation, and the like.
3. Contamination: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
   3.1. Corrosive, explosive or flammable.
   3.2. Hazardous to human or animal life.
   3.3. Detrimental to healthy plant growth.
4. Subsoil: In areas to receive topsoil or planting media, do not use subsoil contaminated with the above materials.
5. Objectionable odour: None.
6. Give notice: If any evidence or symptoms of soil contamination are discovered on the site or in topsoil or planting media to be imported.

### 305 Permitted materials

1. Materials: Composted bark and Composted green/ food waste certified to PAS 100.
2. Give notice: before ordering or using.
3. Declaration of compliance in accordance with BS EN 13650: Required

### 310 Materials not permitted

1. Materials: Peat and products containing peat and river and canal dredgings.

## 315 Imported topsoil to BS 3882

1. Description: For meadow grassland to suit wetland conditions.
2. Quantity: Provide as necessary for areas required for meadow grassland within wetland conditions.
3. Standard: To BS 3882.
4. Classification: Suitable for meadow grassland for seasonally wet soils - to be low nutrient composition to suit grassland mixture and site conditions.
    4.1. Soil textural class to BS 3882, Figure 1: Any class.
        4.1.1. Textural range to be fit for purpose: Soil Scientist to confirm (in writing) that the imported topsoil is fit for purpose with meadow grassland and has the textural range to align with subsoils and the proposed grassland.
5. Source: Submit proposals
    5.1. Product reference: Submit proposals

## 354 Organic materials - soil improver for planting areas and tree pits

1. Type: Alginure Soil Improver
2. Source: Contractor's choice
    2.1. Product reference: Submit proposals

## 356 Tree planting and mulching compost for tree pits

1. Description: Tree planting and mulching compost
2. Type: Compost
3. Source: Contractor's choice
    3.1. Product reference: Submit proposals

## 357 Organic materials for external planting beds

1. Type: Compost
2. Source: Contractor's choice
    2.1. Product reference: Submit proposals

## 401 Organic fertilizers - For planting areas and tree pits

1. Description: For tree pits and planting beds only. Do not apply fertiliser to wildflower grassland areas.
2. Manufacturer/ source: Contractor's choice
    2.1. Product reference: Submit proposals
3. Standard: In accordance with the Fertilizer Industry Assurance Scheme (FIAS)
4. Purpose: General purpose fertilizer
5. Type: Sanitized and stabilized compost
6. Availability to plants: Slow release

## 405 Inorganic fertilizers

1. Description: For amenity grass areas ONLY

2. Manufacturer/ source: Germinal Amenity
    2.1. Product reference: Agrosil LR 0-20-0
3. Standard: In accordance with The EC Fertilisers (England and Wales) Regulations 2006
4. Purpose: Pre-seeding fertilizer

### 406 Mulch - For tree pits and planting beds

1. Description: Premium grade bark mulch for tree pits and planting beds
2. Manufacturer/ source: Eco Landscaping
    2.1. Product reference: Eco Woodland Mulch
3. Standard: 100% recycled to BSI EN ISO 14021

## Execution

### 610 Topsoil analysis

1. Soil to be analysed: Insitu topsoil and site-won topsoil stockpile
2. Soil analyst: MCERTS accredited testing laboratory specialising in the chemical testing of soil for horticultural purposes. eg, Tim O'Hare Associates t: 01491 822 653
3. Samples: Collect in accordance with BS 3882.
4. Submit
    4.1. Declaration of analysis: In accordance with BS 3882, clause 6 and Table 1.
    4.2. Additional analysis: Not required
    4.3. Report detailing soil analyst's recommendations.

### 615 Testing of materials

1. Material to be analysed: Organic materials
2. Laboratory: Contractor's choice
3. Samples: Collect in accordance with PAS 100
4. Submit
    4.1. Declaration of analysis: Chemical analysis, chemical contaminants, nutrient content, and pH value.
    4.2. Report detailing analyst's recommendations.

### 620 Importing topsoil

1. Give notice: Before stripping topsoil for transfer to site.
    1.1. Notice period: 5 days

### 625 Sample loads

1. Description: FOR IMPORTED TOPSOIL
2. Deliver to site a sample load: of 5 kg
3. Give notice: Allow inspection before making further deliveries to site. Retain for comparison with subsequent loads.
    3.1. Notice period: 5 days

## 630 Documentation for imported topsoil

1. Description: For shrub beds
2. Timing: Submit at handover.
3. Contents
   - 3.1. Full description of all soil components.
   - 3.2. Record of source for all soil components.
   - 3.3. Record drawings showing the location and depth of all soils by type and grade.
   - 3.4. Declaration of analysis: in accordance with BS 3882, clause 6 and Table 1.
4. Number of copies: Two

## 635 Documentation for compost and composted materials

1. Description: FOR PLANTING BEDS AND GRASSED AREAS
2. Timing: Submit at handover.
3. Contents
   - 3.1. Full description of all compost components.
   - 3.2. Record of source for all compost components.
   - 3.3. Analyst's report for each test carried out.
   - 3.4. Declaration of compliance: in accordance with PAS 100 and BSI PD CR 13456.
   - 3.5. Quality Compost Protocol certification: Required
4. Number of copies: Two

## 640 Documentation for preparation materials

1. Description: FOR ORGANIC MATERIALS AND SOIL IMPROVERS
2. Timing: Submit at handover.
3. Contents
   - 3.1. Full description of all components.
   - 3.2. Record of source for all components.
   - 3.3. Analyst's report for each test carried out.
   - 3.4. Supplier's declaration of compliance with BSI PD CR 13456.
4. Number of copies: Two

## 650 Notice

1. Give notice before
   - 1.1. Setting out.
   - 1.2. Spreading topsoil.
   - 1.3. Applying herbicide.
   - 1.4. Applying fertilizer.
   - 1.5. Visiting site during maintenance period.
2. Period of notice: 2 weeks

## 655 Mechanical tools

1. Restrictions: Do not use within 500 mm of tree and plant stems.

## 660 Grading subsoil for all areas

1. Description: All soft landscape areas
2. Standard: In accordance with BS 8601.
3. General: Grade to smooth flowing contours to achieve specified finished levels of topsoil.
4. Areas of thicker topsoil: Excavate locally.
5. Avoid compaction.
6. Excess subsoil: Remove.

## 665 Subsoil surface preparation for all areas

1. Standard: In accordance with BS 3882, and in accordance with the Soils Resource Survey and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA, 2009.
2. General: Excavate and/ or place fill to required profiles and levels, as section D20.
3. Loosening
    - 3.1. When ground conditions are sufficiently dry to allow breaking up of soils, loosen thoroughly to specified depth:
        - 3.1.1. Light and noncohesive subsoils: 300 mm
        - 3.1.2. Stiff clay and cohesive subsoils: 450 mm
        - 3.1.3. Rock and chalk subgrades: Lightly scarify to promote free drainage.
    - 3.2. Wet conditions: Do not loosen subsoils.
4. Stones: Immediately before spreading topsoil, remove stones larger than 50 mm.
5. Remove from site: Arisings, contaminants and debris and builders rubble
6. Tools: : Hand operated machinery or hand tools should be used where necessary, e.g. within tree root protection areas.
7. Note: : If the topsoil is not immediately applied to the prepared topsoil and the subsoil left open to the weather, it should be re-broken up to a depth of 150mm immediately prior to topsoiling.

## 670 Inspecting formations

1. Give notice: Before spreading topsoil for grassland areas and planting beds.
2. Notice period: 7 days

## 675 Preparation of undisturbed topsoil

1. Standard: In accordance with BS 4428.
    - 1.1. Grading and cultivation: Category B
2. Hard ground: Break up thoroughly.
3. Clearing: Remove visible roots and large stones with a diameter greater than 50 mm.
4. Areas covered with turf or thick sward: Plough or dig over to full depth of topsoil, avoiding the root protection areas of existing retained trees.
5. Fallow period (minimum): One month minimum, and for as long as possible

5.1. Weed control: At appropriate times treat with a suitable translocated nonresidual herbicide.

## 680 Surplus topsoil to be retained

1. Generally: Spread and level on site:
   1.1. Locations: As directed by Landscape Architect
   1.2. Protected areas: Do not raise soil level within root protection areas of trees that are to be retained.

## 685 Surplus materials to be removed

1. Topsoil removal from site: Topsoil remaining after completion of all landscaping work
2. Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

## 690 Topsoil storage heaps

1. Location: To be agreed with contract administrator, in accordance with the Soils Resource Survey.
2. Height (maximum): 2m
3. Width (maximum): to suit site constraints - maximum 3m
   3.1. Formation: Loose tip and shape from the side only, without running machinery on the heap at any time.
4. Protection
   4.1. Do not place any other material on top of storage heaps.
   4.2. Do not allow construction plant to pass over storage heaps.
   4.3. Prevent compaction and contamination, by fencing and covering as appropriate.

## 700 Grading of topsoil

1. Topsoil condition: Reasonably dry and workable.
2. Contours: Smooth and flowing, with falls for adequate drainage.
   2.1. Hollows and ridges: Not permitted.
3. Give notice: If required levels cannot be achieved by movement of existing soil.

## 705 Handling topsoil

1. Standard: In accordance with BS 3882:2015, Annex A, and the Soils Resource Survey and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA (2009).
2. Aggressive weeds: Give notice and obtain instructions before moving topsoil.
3. Plant: Select and use plant to minimize disturbance, trafficking and compaction.
4. Contamination: Do not mix topsoil with:
   4.1. Subsoil, stone, hardcore, rubbish or material from demolition work.
   4.2. Other grades of topsoil.
5. Multiple handling: Keep to a minimum. Use or stockpile topsoil immediately after stripping.

6. Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall, or when the moisture content is greater than the plastic limit less 3%, to BS1377-2.

## 710 Spreading topsoil on grassed areas

1. Description: All grassed areas except wildflower areas
2. Standard: In accordance with BS 3882:2015, Annex A, and the Soils Resource Survey and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites by DEFRA (2009).
3. Temporary roads/ surfacing: Remove before spreading topsoil.
4. Layers
    4.1. Depth (maximum): 150 mm.
    4.2. Gently firm each layer before spreading the next.
5. Depth after firming and settlement: 150 mm for grass areas
6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

## 711 Spreading topsoil on wildflower meadow

1. Description: All wildflower areas
2. Standard: In accordance with BS 3882.
3. Temporary roads/ surfacing: Remove before spreading topsoil.
4. Layers
    4.1. Depth (maximum): 150 mm.
    4.2. Gently firm each layer before spreading the next.
5. Depth after firming and settlement: 50-100mm
6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

## 712 Spreading topsoil on planting beds

1. Description: All planting beds
2. Standard: In accordance with BS 3882.
3. Temporary roads/ surfacing: Remove before spreading topsoil.
4. Layers
    4.1. Depth (maximum): 150 mm.
    4.2. Gently firm each layer before spreading the next.
5. Depth after firming and settlement: 450 mm
6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

## 713 Spreading topsoil on tree pits

1. Description: For tree pits
2. Standard: In accordance with BS 3882.
3. Temporary roads/ surfacing: Remove before spreading topsoil.

4. Layers
    4.1. Depth (maximum): 150 mm.
    4.2. Gently firm each layer before spreading the next.
        4.2.1. Consolidation of layers / final layer: At each stage the fill should be firmed in to eliminate all air pockets under and around the root system, but with care being taken not to excessively compact the soil. Do not consolidate the final layer.
5. Depth after firming and settlement: 300 mm
6. Crumb structure: Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible.

## 715 Loose tipping of topsoil

1. Standard: In accordance with BS 3882.
2. General: Do not firm, consolidate or compact topsoil when laying. Tip and grade to approximate levels in one operation with minimum of trafficking by plant.

## 718 Final cultivation - planting beds

1. Description: For planting beds
2. Compacted topsoil: Break up to full depth.
3. Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
4. Depth: 300mm
5. Particle size (maximum): 10 mm
6. Timing: After grading, and within a few days before seeding
7. Weather and ground conditions: Suitably dry.
8. Surface: Leave regular and even - no dips and hollows
9. Levels: As engineers detailed levels drawing
10. Undesirable material brought to the surface
    10.1. Remove visible weeds.
    10.2. Remove roots and large stones with any dimension exceeding 50 mm.

## 719 Final cultivation - for amenity grass areas

1. Description: For amenity grass areas
2. Compacted topsoil: Break up to full depth.
3. Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
4. Depth: 150mm
5. Particle size (maximum): 10 mm
6. Timing: After grading, and within a few days before seeding
7. Weather and ground conditions: Suitably dry.
8. Surface: Leave regular and even - no dips and hollows
9. Levels: As engineers detailed levels drawing
10. Undesirable material brought to the surface
    10.1. Remove visible weeds.
    10.2. Remove roots and large stones with any dimension exceeding 25 mm.

## 720 Final cultivation - for wildflower / meadow grassland areas

1. Description: For wildflower / meadow grassland areas
2. Compacted topsoil: Break up to full depth.
3. Tilth: Loosen, aerate and break up and rake topsoil to a fine tilth with smooth flowing contours
4. Depth: 150mm
5. Particle size (maximum): 10 mm
6. Timing: After grading, and within a few days before seeding
7. Weather and ground conditions: Suitably dry.
8. Surface: Leave regular and even - no dips and hollows
9. Levels: As engineers detailed levels drawing
10. Undesirable material brought to the surface
    - 10.1. Remove visible weeds.
    - 10.2. Remove roots and large stones with any dimension exceeding 75 mm.

## 721 Final cultivation - for tree pits

1. Description: For tree pits
2. Compacted topsoil: Break up to full depth.
3. Tilth: Loosen, aerate and break up topsoil to a tilth suitable for blade grading.
4. Depth: 300mm
5. Particle size (maximum): 20mm
6. Timing: After grading and fertilizing, and within a few days before seeding
7. Weather and ground conditions: Suitably dry.
8. Surface: Leave regular and even.
9. Levels: Refer to tree pit detail (drawing P18-1367_22)
10. Undesirable material brought to the surface
    - 10.1. Remove visible weeds.
    - 10.2. Remove roots and large stones with any dimension exceeding 50 mm.

## 722 Finished levels of topsoil after settlement

1. In relation to adjoining paving, kerbs or hard surfaces: 25 mm above.
2. In relation to adjoining shrub areas: 25mm above
3. In relation to adjacent grass areas: 50 mm below
4. Seeded areas: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.
5. Within root spread of existing trees and shrubs to be retained: Do not dig or cultivate.
6. Adjoining soil areas: Marry in.
7. Thickness of turf or mulch: Included.

## 806 Applying soil ameliorant - For Tree Pits

1. Description: To tree pits only
2. Type: Alginure Soil Improver

3. Fully incorporate into topsoil to a depth of 300 mm.
4. Application: Spread evenly.
    4.1. Timing: Apply prior to cultivation.
    4.2. Rate: 1.5 kg/m3
5. Timing: Prior to cultivation.
6. Other requirements: Submit details of recent chemical and physical analysis before ordering

## 807 Applying soil ameliorant - For Planting beds

1. Description: To planting beds only
2. Type: Alginure Soil Improver
3. Fully incorporate into topsoil to a depth of 300 mm.
4. Application: Spread evenly.
    4.1. Timing: Apply prior to cultivation.
    4.2. Rate: 75g/m²
5. Timing: Prior to cultivation.
6. Other requirements: Submit details of recent chemical and physical analysis before ordering

## 810 Applying compost - to tree pits

1. Description: Tree planting and mulching compost for tree pits
2. Application rate for trees:: 20litres/m2 for tree pits to be incorporated into the top 150mm topsoil
    2.1. Timing:: Apply prior to cultivation.
3. Other requirements: Submit details of recent chemical and physical analysis before ordering

## 820 Applying general fertilizer - For planting beds

1. Description: For planting beds only, do not apply fertiliser to wildflower grassland areas
2. Application: Spread evenly, carefully incorporating below mulch materials.
    2.1. Timing: Immediately before cultivation.
    2.2. Application rate: As per manufacturer's recommendations

## 825 Applying fertilizer (pre-seeding) - to amenity grass areas

1. Description: For amenity grass areas only.
2. Application: Before final cultivation and three to five days before seeding/ turfing.
3. Spreading instructions:: Carry out two equal spreading at right angles to each other and diagonally to the main axis.
    3.1. Rate: 50g/m2
    3.2. Application for rotary spreader: Refer to manufacturer's recommendations

## 826 Applying fertilizer to tree pits

1. Description: All tree pits
2. Application: Spread evenly, carefully incorporating below mulch materials.
3. Timing: Immediately before cultivation

4. Coverage:
5. Spread evenly, in transverse directions.
    5.1. Rate: 75 g/m²

### 845 Applying loose mulch - to tree pits and planting beds

1. Timing: Immediately after planting
2. Preparation: Ensure that soil is thoroughly moistened, applying water (to field capacity) where necessary
3. Coverage of mulch (minimum)
    3.1. Planting beds (depth): 75 mm depth
        3.1.1. Application : Take care not to bury groundwater plants.
    3.2. Trees: Depth to taper from 50-75mm to no more than 25mm over the root-ball surface, ensuring that the root flare and the base of the stem, along within any ground cover plants are not buried. Taper mulch to 20mm where circle adjoins footway or highway.
        3.2.1. Shape / Size:: Spread mulch to min. 1.0m dia circle around individual trees, where space allows spread mulch to 1.0m radius.

## Completion

### 905 Applying maintenance fertilizer to soil

1. Description: To all shrub planting areas. Do not apply fertiliser to wildflower grassland areas
2. Duration: Carry out the following operations from completion of seeding/ turfing until practical completion.
3. Time of year: March or April
4. Application: Evenly spread, carefully incorporating below mulch materials.
5. Rate: To suit soil report recommendations

### 920 Applying mulch

1. Watering: Ensure that soil is thoroughly moistened prior to mulching, applying water where necessary.
2. Planting beds: Re-mulch.
    2.1. Depth (minimum): 75mm
    2.2. Timing:: Top up at least once annually.
3. Trees: Remulch.
    3.1. Depth (minimum): To orignal specified depth - Spread to a minimum 1.0m dia circle around individual trees, where space allows this will be expanded to 1.0m radius. The depth will taper from 50-75mm to no more than 25mm over the root-ball surface, ensuring that the root flare and base of the stem, along with any ground cover plants, are not buried. The mulch depth should taper to 20mm where the circle adjoins a footway or highway. For trees in the highway verge the mulching circle should comprise a rectangle or oval extending to at least 1.5m radially lengthways.
        3.1.1. Timing:: Check during monthly site visits and top up as necessary

Ω End of Section

# Q30
# Seeding/ turfing

## General information/requirements

### 115 Seeded areas

1. Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
2. Appearance: A closely knit, continuous ground cover of even density, height and colour.

### 120 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable.

### 146 Watering

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without displacing seed, seedlings or soil.
3. Frequency: As necessary to ensure the establishment and continued thriving of all seeding.

### 150 Water restrictions

1. Timing: If water supply is or is likely to be restricted by emergency legislation do not carry out seeding until instructed. If seeding has been carried out, obtain instructions on watering.

### 160 Notice

1. Give notice before
    1.1. Setting out.
    1.2. Applying herbicide.
    1.3. Applying fertilizer.
    1.4. Preparing seed bed.
    1.5. Seeding or turfing.
    1.6. Visiting site during maintenance period.
2. Period of notice: 1 week

### 170 Setting out

1. Boundaries: Mark clearly out to match the planting plan / layout arrangements as set out on the landscape plans. Obtain approval of setting out before starting any site work of cultivations.
2. Delineation: In straight lines or smoothly flowing curves as shown on drawings.

## Preparation

### 210 Herbicide

1. Description: FOR ALL GRASSED AREAS
2. Type: Suitable for suppressing perennial weeds.

3. Timing: Allow fallow period before cultivation.
    3.1. Duration: As manufacturer's recommendation

### 212 Seed bed cleaning before sowing

1. Description: ALL GRASSED AREAS
2. Operations: Kill pernicious weeds with selective contact herbicide.

### 250 Soil requirements

1. Type
    1.1. Seeded areas: Soil for grass swards, as section Q28

## Seeding

### 311 Amenity grass seed

1. Description: For amenity grass areas
2. Supplier: Germinal (or similar approved)
    2.1. Mixture reference: A22 Low maintenance
3. Application rate: 35g/m²

### 312 Wildflower seed mixture

1. Description: Wildflower meadow areas
2. Supplier: Emorsgate (or similar approved)
    2.1. Mixture reference: EM3 Special General Purpose Meadow Mixture
3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): UK origin.
4. Application rate: 4 g/m²

### 313 Meadow grass seed mixture

1. Description: Lown mown grassland areas
2. Supplier: Emorsgate (or similar approved)
    2.1. Mixture reference: EG1 Special Species Rich Long Grass
3. Origin of each species (as defined in Flora Locale's Code of practice for collectors, growers and suppliers of native flora): UK origin.
4. Application rate: 5 g/m²

### 319 Quality of seed

1. Description: FOR ALL GRASSED AREAS
2. Freshness: Produced for the current growing season.
3. Certification: Blue label certified varieties.
    3.1. Standard: EC purity and germination regulations.
    3.2. Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
4. Samples of mixtures: Submit when requested.

### 322 Quality of wildflower / meadow grassland seed

1. Description: FOR WILDFLOWER / MEADOW GRASSLAND AREAS
2. Standard: In accordance with Flora Locale's 'Code of practice for collectors, growers and suppliers of native flora'.
3. Germination testing: Submit germination test results (to ISTA International rules for seed testing)
4. Freshness of seed: Produced for the current growing season
5. Samples: Submit when requested.

### 330 Sowing

1. General: Establish good seed contact with the root zone.
2. Method: Manually broadcast, raked and rolled in line with manufacturer's recommendations.
   2.1. Distribution: 2 equal sowings at right angles to each other and diagonally to main axis

### 335 Amenity grass sowing season

1. Grass seed generally: October / November (late autumn) or early spring February / March
   1.1. Weather conditions:: Only sow during calm weather and not when the ground is waterlogged or frost bound.

### 336 Wildflower / meadow grassland sowing season

1. Wildflower seed generally: March to May or August to October
2. Weather conditions: Only sow during calm weather and not when the ground is waterlogged or frost bound.

### 340 Pre-emergent herbicide

1. Description: Amenity grass only
2. Standard: Pesticide Safety Directorate approved.
3. Application rate: In accordance with manufacturer's written recommendation.
   3.1. Timing: Immediately after sowing.

## Turfing

### 400 Cultivated turf

1. Description: For amenity grass areas - double width of 300mm wide turf strips to edges of hard surfaces
2. Supplier: Rolawn Ltd (or similar)
   t: 0845 604 6050
   2.1. Product reference: Rolawn Medallion Turf
3. Properties of soil used for turf production: Peat-free, well drained sandy loam

### 410 Turf to BS 3969

1. Description: For amenity grass areas only
2. Standard: To BS 3969, free from undesirable grasses and weeds.

2.1. Grade: Fine sports/ ornamental turf

3. Source: Submit proposals.
4. Herbicide treatment: Apply not less than four weeks and not more than three months before lifting.
5. Dimensions: Turves to be regular in shape, 300mm wide and of uniform thickness (minimum 25mm). The grass should be closely mown and shall not exceed 25mm in height.

## 420 Delivery and storage

1. Timing: Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist.
2. Frosty weather or waterlogged ground: Do not lift turf.
3. Delivery: Arrange to avoid need for excessive stacking.
4. Stacking height (maximum): 1 m.
   4.1. New Item: Do not stack the turf in rolls for more than 3 days.
5. Dried out or deteriorated turf: Do not use.
6. Certification
   6.1. Standard: To BS 3969.
   6.2. Declaration: Sward species composition

## 430 Turfing generally

1. Standards:: Turfing operations shall be in accordance with BS 4428.
2. Time of year: To be agreed
3. Timing of laying
   3.1. Spring and summer: Within 18 hours of delivery.
   3.2. Autumn and winter: Within 24 hours of delivery.
4. Weather conditions: Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.
5. Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.
6. Jointing: Whole turves shall be laid around the perimeter of the area to be turfed. The central area shall be laid in rows with staggered joints, well butter together, working from planks positioned on turves already laid. Do not stretch turf.
7. Edges: Whole turfs, trimmed to a true line.
8. Adjusting levels: Remove any high spots or unevenness and fill hollows with fine soil.
9. Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.
10. Dressing, brushed well in to completely fill all joints: Fine topsoil.
11. Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below.
    11.1. Watering - timing:: Water day for the first two weeks, unless it has rained sufficiently on each day to saturate the turf.

### 450 Trimming turf

1. Newly planted tree pits: Neatly cut away around individual trees.
    1.1. Diameter: 1000 mm
    1.2. Tree pit surface: Respread existing mulch

## Protecting/cutting

### 510 Protective fencing

1. Fencing type: Post and wire with netting
    1.1. Height: 1m
2. Erection: On completion of seeding/ turfing.
3. Removal: Maintain fencing until the grass is well established. Remove once it is deemed that the grass is well established. Fencing will remain the property of the Contractor

### 530 First cut of amenity grassed areas

1. Timing: When grass is reasonably dry.
    1.1. Height of initial growth: 75 mm
2. Preparation
    2.1. Debris and litter: Remove.
    2.2. Stones and earth clods larger than 25 mm in any dimension: Remove
3. Height of first cut: 20-50 mm
4. Mower type: Rotary
5. Arisings: Remove from site

### 540 First cut of wildflower grassland areas

1. Description: WILDFLOWER MEADOWS
2. Height of initial growth: 75mm
3. Preparation:
    3.1. Debris and litter:: Remove.
    3.2. Stones and earth clods larger than 25mm in any dimension. : Remove.
4. Height of first cut: 40-60cm
5. Mower type: Contractor's choice
6. Arisings: Remove from site

### 590 Cleanliness

1. Soil and arisings: Remove from hard surfaces.
2. General: Leave the works in a clean, tidy condition at completion and after any maintenance operations.

## Maintenance

### 610 Failures of seeding / turfing

1. Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period.
2. Defective materials or workmanship: Areas that have failed to thrive.
   2.1. Exclusions: Theft or malicious damage.
3. Method of making good: Recultivation and reseeding/ returfing.
4. Timing of making good: Submit proposals

### 620 Maintaining - Amenity Grass

1. Description: For amenity grassed areas only
2. Duration: Carry out the following operations from completion of seeding/ turfing until: practical completion.
3. Maximum height of growth at any time: 50mm
4. Preparation: Before each cut remove all litter and debris.
5. Cutting: As and when necessary to a height of 25 -50 mm.
   5.1. Arisings: Remove.
6. Bulb planting areas: Do not cut until bulb foliage has died down. Allow bulbs to flower and build up energy, do not cut grass in bulb areas until 6 weeks after flowering.
7. Trimming: All edges.
   7.1. Arisings: Remove.
8. Weed control: Substantially free of broad leaved weeds.
   8.1. Method: Application of a suitable selective herbicide.
9. Stones brought to the surface: Remove regularly.
   9.1. Size: Exceeding 25 mm in any dimension.
10. Areas of settlement: Make good.
11. Watering: As necessary to maintain healthy growth.
12. Other : Make good any bare patches.

### 650 Maintaining grassed areas with perennial wildflowers

1. Duration: Carry out the following operations from completion of seeding/ turfing until: practical completion.
2. Preparation: Before each cut remove all litter and debris.
3. Height and frequency of cut in first growing season
   3.1. Time of first cut: June/ July
   3.2. Height of first cut: 40-60 mm
   3.3. Frequency of subsequent cutting (minimum): Every 6-8 weeks until autumn
   3.4. Height of growth permitted (maximum): 125 mm
   3.5. Control first year weed growth by topping or mowing, remove cuttings.
4. Height and frequency of cut in second growing season
   4.1. Time of cut: Single cut in October

4.2. Height of cut: 75 mm

5. Trimming: All edges.
   5.1. Arisings: Remove.
6. Watering: As necessary to maintain healthy growth.

Ω End of Section

# Q31
# External planting

## General information/ requirements

### 112 Site clearance generally

1. General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
2. Stones: Remove those with any dimension exceeding 50 mm.
3. Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
4. Vegetation: Clear scrub to ground level by flail mowing and remove arisings
5. Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
6. Additional requirements: Fully remove rhizomatous weeds.

### 118 Soil conditions

1. Soil for cultivating and planting: Moist, friable and (except in aquatic/ marginal planting) not waterlogged.
2. Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

### 120 Climatic conditions

1. General: Carry out the work while soil and weather conditions are suitable. Planting shall not be carried out when the ground is waterlogged, frost bound or during periods of cold drying winds.
    1.1. Strong winds: Do not plant.

### 125 Times of year for planting

1. General timescales: All plants should be planted within a short time frame, preferably immediately after arrival on site.
2. Deciduous trees and shrubs: Late October to late March.
3. Conifers and evergreens: September/ October or April/ May.
4. Herbaceous plants (including marginal): September/ October or March/ April.
5. Container grown plants: At any time if ground and weather conditions are favourable.
    5.1. New Item: If container/pot grown plants are not planted on arrival at site they must be watered frequently to prevent drying out. If the health of any plant suffers due to being stored and drying out they will be replaced at the contractor's expense.
    5.2. Watering and weed control: Provide as necessary.
6. Dried bulbs, corms and tubers: September/ October.
7. Green bulbs: After flowering in spring.
8. Wildflower plugs: Late August to mid November or March/ April.
9. Aquatic plants: May/ June or September/ October.
    9.1. Storage of aquatic plants: Keep plants watered and in shade until planted. Do not allow to dry out. All plants should be planted within a short time frame, preferably

immediately after arrival on site. If container/pot grown plants are not planted on arrival at site they must be watered frequently to prevent drying out. If the health of any plant suffers due to being stored and drying out they will be replaced at the contractor's expense.

9.2. Timing: Planting to be carried out prior to the swales / drainage basins features being brought online.

10. Note - barefoot planting stock: All bareroot planting stock will be kept covered until actually planted in order to minimise water-loss and prevent the roots from drying out.

11. Note: If planting is undertaken whilst construction work is still underway temporary protection shall be installed to ensure that no damage is caused to the soil structure and new plants. If any damage is found to have occurred due to lack of temporary protection, the works will be made-good by the contractor.

## 130 Mechanical tools

1. Restrictions: Do not use within 500 mm of tree and plant stems.

## 145 Watering

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without damaging or displacing plants or soil.
3. Frequency: Until well established all shrubs are to be watered during the growing season. Following any dry periods of 7-10 days, soil water content should be assessed and watering undertaken as necessary. Planting areas are to be brought up to field capacity at each visit. If plants are showing signs of drought stress the watering regime should be reviewed and increase as required. Care should be taken to ensure applied water is absorbed into the root-zone and does not run off the surface.

## 146 Watering - trees

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without damaging or displacing plants or soil.
3. Frequency: Until well established all trees are to be watered during the growing season. Following any dry periods of 7-10 days, soil water content should be assessed and watering undertaken as necessary. Each tree is to receive 40 litres or as required. If trees are showing signs of drought stress the watering regime should be reviewed and increase as required. Care should be taken to ensure applied water is absorbed into the root-zone and does not run off the surface.

## 150 Water restrictions

1. General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.

## 160 Notice

1. Give notice before
    1.1. Setting out.
    1.2. Applying herbicide.
    1.3. Applying fertilizer.
    1.4. Delivery of plants/ trees.

1.5. Planting shrubs.

1.6. Planting trees into previously dug pits.

1.7. Watering.

1.8. Visiting site during maintenance period.

2. Period of notice: One week

## 170 Soil requirements

1. Type

1.1. Planted beds: Planting bed soil system, as section Q28

1.2. Tree pits, shrub pits and other backfilling: Plant pit backfilling soil system, as section Q28.

1.3. Mulch applied after planting: Mulching and top dressing system, as section Q28

## 200 Plants/ trees - general

1. Condition: Materially undamaged, sturdy, healthy and vigorous. Trees to have sturdy trunks and well balanced canopies.
2. Standard: All plants shall conform to BS 3936.
3. Appearance: Of good shape and without elongated shoots.
4. Hardiness: Grown in a suitable environment and hardened off.
5. Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
6. Budded or grafted plants: Bottom worked.
7. Root system and condition: Balanced with branch system.

7.1. Standard: The National Plant Specification, no tree shall be planted that does not conform with BS 8545:2014, in particular Table 1, p21, see clause 201.

8. Species: True to name.
9. Origin/ Provenance: Grown in the United Kingdom for at least one growing season, unless otherwise approved
10. Definition: Origin and Provenance have the meaning given in the National Plant Specification.
11. Acceptance of all planting stock:: All planting stock should only be accepted on site if they are materially undamaged and have been carefully protected and packed to survive transport, loading and unloading to site. Plants that have suffered nominal damage should be carefully pruned to remove any damage. Plants that are materially damaged should be rejected.
12. Nurseries: : Supplying nurseries shall be registered under the HTA Nursery Specification Scheme.

## 201 Trees - Acceptance of tree stock

1. No tree shall be planted that does not conform with BS 8545:2014, in particular Table 1, p21. It shall be confirmed before acceptance that the trees accord with BS 8545:2014, - prior to acceptance of delivery to site the check list set out in Table 1, p21 of BS 8545:2014 should be reviewed and trees which do not accord with this check list should be rejected.
2. Trees should be accepted on site only if they are materially undamaged and have been carefully protected and packaged to survive transport, loading / unloading to site.
3. Trees that have suffered nominal damage should be carefully pruned to remove any damage. Trees that are materially damaged should be rejected.

## 215 Plants/ trees - specification criteria

1. Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification (available on CS Design Software Limited's website).
2. All plants shall conform to BS 3936 and be in accordance with the National Plan Specification.
3. No tree shall be planted that does not conform with BS 8545:2014, in particular Table 1, p21, see clause 201.

## 225 Bulbs/ Corms/ Tubers

1. Condition: Firm, entire, not dried out or shrivelled.
2. Health: Free from pests, diseases and fungus.
3. Handling: Remove from packaging immediately.
4. Storage: Permitted only when necessary.
    4.1. Location: Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
    4.2. Duration: Minimum period.
    4.3. Temperature: 18-21°C.

## 235 Container grown plants/ Trees

1. Growing medium: With adequate nutrients for plants to thrive until permanently planted.
2. Plants: Centred in containers, firmed and well watered.
3. Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting. Containerised trees should also be reviewed to ensure that root circling has not begun, producing a packed distorted root system which prevents lateral root development and reduces stability. Where minor root circling is discovered the root ball can be 'shaved' to remove potential stem girdling circling roots, and roots that grow vertically down the side of the container are removed. The outer periphery of the root ball should be shaved to a maximum of 2 inches thick. Any trees which suffer from root girdling as a consequence of root circling should not have been accepted onto the site.
4. Wrappings and cages : All non-perishable wrapping and cages shall be removed prior to planting root balled trees. Perishable wrappings and fine gauge non-galvanised wire may be retained until the tree is in position but then cut, peeled back and ideally removed to one third of the root ball height. Wrappings and cages should be removed entirely from cohesive root balls.
5. Hardiness: Grown in the open for at least two months before being supplied.
6. Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

## 245 Labelling and information

1. General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:
    1.1. Full botanical name.
    1.2. Total number.
    1.3. Number of bundles.
    1.4. Part bundles.

1.5. Supplier's name.

1.6. Employer's name and project reference.

1.7. Plant specification, in accordance with scheduled National Plant Specification categories.

2. Additional information: Submit on request: Country of origin.

## 246 Labelling and information

1. Standard: To BS 3936.

## 255 Plants/ trees reserved at supplier's premises

1. Types/ Species: As plant schedule
2. Predelivery inspection: Give notice.
3. Labelling: Identify inspected plants/ trees as reserved for use on this project.

## 260 Plant/ Tree substitution

1. NO SUBSTITUTES SHALL BE PERMITTED WITHOUT PRIOR WRITTEN AGREEMENT FROM THE LANDSCAPE ARCHITECT, AND BY THE LOCAL PLANNING AUTHORITY.
2. Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:

2.1. Price.

2.2. Difference from specified plants/ trees.

2.2.1. and reason for substitution

3. Approval: Obtain written approval (as above) before placing order / making any substitution.

## 265 Plant handling, storage transport and planting

1. Standard: To CPSE 'Handling and establishing landscape plants' and BS 8545.
2. Frost: Protect plants from frost.
3. Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
4. Plant packaging: Coextruded polyethylene bags with black interior and white exterior
5. Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped
6. Planting: Upright or well balanced with best side to front.

## 280 Treatment of tree wounds

1. Cutting: Keep wounds as small as possible.

1.1. Cut cleanly back to sound wood using sharp, clean tools.

1.2. Leave branch collars. Do not cut flush with stem or trunk.

1.3. Set cuts so that water will not collect on cut area.

2. Fungicide/ Sealant: Do not apply unless instructed.

## 290 Surplus material

1. Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

1.1. Move subsoil to designated location in accordance with the Plas dwr Outline Soils Re-use Strategy by Arup. Do not dispose of surplus subsoils unless confirmed in writing by the CA / Arup and Landscape Architect.

1.2. Temporary labelling - remove after instruction by the Landscape Architect

## Plant containers - Not Used

## Preparation of planting beds/ planting materials

### 300 Herbicide

1. Description: Where necessary to treat remaining weeds, a minimal approach to using herbicides should be adopted.
2. Locations: All planting areas
3. Type: A non-residual herbicide suitable for supressing perennial weeds.
4. Timing: Allow fallow period before cultivation.
   4.1. Duration (minimum): As manufacturer's recommendation

### 305 Weed control

1. Locations: All planting areas
2. General: Prevent weeds from seeding and perennial weeds from becoming established, by hand weeding, use of herbicides to be minimised where possible.

### 380 Cultivation in unsuitable conditions

1. The Landscape Contractor shall not carry out cultivation or the incorporation of mulch or soil conditioners when ground conditions are unsuitable (eg. saturated or frozen) as this may result in the development of severely denatured, structureless, or anaerobic soil conditions and subsequent plant deaths. The Landscape Contractor will be held wholly responsible for plant losses and replacement due to this clause and for any remedial works necessary to reinstate the condition of the soil so that is suitable for replanting.

### 385 Mulch matting/ Geotextile fabric

1. Description:
2. Manufacturer:
   2.1. Product reference:
3. Type:
4. Recycled content:
5. Timing: Lay before planting.
6. Watering: Water soil thoroughly before laying.
7. Laying: In close contact with soil surface. Lap or butt joints as recommended by manufacturer, with no gaps.
8. Planting: Cut neat slits or flaps. Refit closely around plant stems.
9. Overlay:

### 390 Coir rolls for aquatic/ Marginal planting

1. Description: To be installed along eastern bank of Emm Brook

2. Manufacturer: AGA Group
    2.1. Product reference: Pre-vegetated Coir Rolls
3. Lining: UV stabilised multi-strand polypropylene yarn forming 50mm diamond mesh pattern
4. Laying:

    Rolls fixed in position sitting on brook water line, tied to wooden stakes (driven into bank to a depth appropriate to provide long-term rigidity) using cord in criss-cross pattern
5. Planting: Pre-vegetated

## Planting shrubs/ herbaceous plants/ bulbs

### 400 Random plant layout

1. Description: To all planting beds, as per the detailed planting plans.
2. Spacing: Random groups of 5-7 plants of the same species. Evenly, avoiding straight lines, man-made grids or as directed by the detailed planting plans.
3. Density: As per the planting schedule

### 405 Shrub planting pits

1. Timing: Excavate 1-2 days (maximum) before planting.
2. Sizes: 150 mm wider than roots when fully spread and 300 mm deep
3. Pit bottom improvement Break up to a depth of 150 mm, incorporating 25 g of slow release fertilizer per planting pit.

### 445 Planting bulbs/ Corms/ Tubers

1. Depth: Top of bulb/ corm/ tuber at a depth of approximately twice its height, (or as depth suitable for each species). base in contact with bottom of hole.
2. Backfilling: The removed soil backfilled and firmed on top and, where relevant, the removed plug of turf neatly placed back in place after planting.
3. Naturalized planting in existing grassed areas
    3.1. Scattering: Random. Plant bulbs/ corms/ tubers where they fall over the marked out bulb planting areas (as per the detailed planting plans).
    3.2. Planting: Neatly remove a plug of turf and replace after planting.

### 480 After planting

1. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
2. Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
3. Top dressing: Mulching and top dressing system, as section Q28
    3.1. Depth: 75mm to around 900mm dia of each planting station (for shrub planting.)

### 486 Shrub protection - bare-root hedge stock

1. Manufacturer: Green-tech
    1.1. Product reference: 160PS1051-PRO

2. Type: Rainbow Spiral
3. Material: PVC (100% recycled)
4. Size: 0.6m high x 50mm diameter
5. Colour: clear
6. Support: 90cm x 10-12mm bamboo cane, as advised by the manufacturer
7. General: Ensure that protection methods do not impede natural movement of shrubs or restrict growth.

### 487 Shrub protection - container grown hedge stock

1. Manufacturer: Tubex
   1.1. Product reference: Tubex Ecostart
2. Type: Round
3. Material: Polypropelene
4. Size: 0.6m high x 57mm diameter
5. Colour: green
6. Support: 90cm x 32mm x 32mm softwood stake as advised by the manufacturer
7. General: Ensure that protection methods do not impede natural movement of shrubs or restrict growth.

## Planting trees

### 500 Tree planting

1. Standard: Prepare trees and transplant in accordance with BS 8545, in particular Table 1, p21.
2. Timing : All trees should be planted within the day of arrival. If trees are not planted on arrival at site they must be watered frequently to prevent drying out. If the health of any plants suffers due to being stored incorrectly or being allowed to
dry out they will be replaced at the contractor's expense. If bare-root or root-ball trees are not planted on the day of arrival at site they must be heeled-in by placing the roots in a prepared trench and covering them with fine soil which shall be watered in to avoid air pockets around the roots.
3. Conditions: No tree planting shall take place during freezing winds. By preference tree planting must take place when the weather is dull and the ground moist and workable. Planting during frosty conditions will only be permitted if adequate precautions are taken. The prepared root balls must have additional wrapping, and the bottom/sides of the tree pits and the piles of excavated soil must be protected from freezing using boards, tarpaulins or other approved materials.
4. Root system preparation: The root system of the tree should be wetted prior to planting. The tree should be planted at the correct depth considering the position of the root flare and the finished level - the root-ball or root stem transition should be level with the existing host soil or surface.

### 502 Antidesiccant for conifers/ Evergreens

1. Manufacturer: Contractor's choice
   1.1. Product reference: Submit proposals
2. Application: Dip or thoroughly spray before delivering to site. Spray again soon after planting.

2.1. Do not apply in wet or frosty weather.

2.2. Ensure full coverage of underside of foliage.

## 505 Tree pits

1. Sizes: Tree pits of at least 75mm diameter greater than the root system and no deeper than the root-ball / container depth are to be excavated.
2. Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
3. Excavated material: Separate topsoil and subsoil material and stockpile for backfilling
4. Pit bottoms: Excavate with slightly raised centre: Break up base to a depth of 150 mm.
   4.1. Treatment: Soil ameliorant to be worked into the top 150mm of topsoil only in accordance with Soils Resource Report.
5. Pit sides: Scarify to prevent smearing.
6. Extraneous material: All extraneous matter such as plastic, wood, metal and stones greater than 50mm in any dimension shall be removed from site.
7. Backfilling material: Tree pits should be backfilled with 300mm site won topsoil (TS1) and 600mm of suitable site won subsoil (SS1) or a suitable imported subsoil, as per the Soil Resource Survey. Backfill should be added gradually, in layers of 150mm to 230mm depth, ensuring the tree is held upright. At each stage the fill should be firmed in to eliminate all air pockets under and around the root system, but with care being taken not to excessively compact the soil. The final layer should not be consolidated.
8. Rootball support : 150mm washed sand (horticultural grade sharp sand) should be applied to support the root-ball refer to clause 515

## 510 Tree pit root barriers

1. Locations: To be confirmed.
2. Manufacturer: GreenBlue Urban (or equal approved)
   2.1. Web:: www.greenblue.com
   2.2. Email:: enquiries@greenblueurban.com
3. Product reference: ReRoot
4. Thickness: 1.0mm
5. Barrier depth: 1000mm - engineer to confirm service depths and clarify with Landscape Architect prior to contractor ordering.
6. Foil liner: Not required
7. Top of root barrier in relation to finished topsoil level: 50 mm below ground level
8. Installation: With sides vertical. Remove all sharp objects adjacent to barrier.

## 512 Tree pit irrigation and ventilation accessories

1. Manufacturer: Green Blue Urban
2. Product reference: RootRain Civic
3. Type: RRCIVIC1A
4. Locations: To all tree pits
5. Type: Perforated plastics irrigation pipe with inlet
6. Pipe diameter: As supplied

7. Ring diameter: 3000mm
8. Inlet: Cast aluminium
9. Installation
    9.1. Pipe: Lay in loop above root ball with slight fall away from inlet pipe. Trim length to ensure a close fit in the tree pit. Connect both ends of pipe securely into plastics tee junction on inlet.
    9.2. Top cap of inlet: Protruding slightly above finished surround level.
    9.3. Backfill material: Carefully compact in layers.

## 535 Tree stakes

1. Stakes: Untreated softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
    1.1. Preservative treatment: Not required
2. Stake size (minimum): 75mm dia
3. Stake length (minimum): 2000 mm

## 550 Double staking for

1. Description: For all trees
2. Staking
    2.1. Position: Either side of tree position and perpendicular to wind direction.
    2.2. Driving: Vertically at least 300 mm into bottom of pit before planting.
    2.3. Backfilling: Consolidate material around stake.
    2.4. Firming: Sufficiently firm to prevent movement of the rootball/ rootstock.
3. Height of stakes: Cut off to approximately 600 mm above ground level
4. Horizontal bracing: Timber cross bar, 75 mm x 38 mm x 900 mm
    4.1. Fixing: Firmly fix using nails on windward side of tree and as close as possible to the stem without making contact with the bark. Position cross bar horizontally and 25 mm from top of stakes
5. Ties: Flexible rubber belts and plastic sleeves
6. Tying: Secure flexible webbing around tree stem firmly without causing constriction or chafing
7. Nails for fixing ties, belts and webbing: To BS 1202-1, galvanized, minimum 25 mm long and with 10 mm diameter heads.
8. Nails for fixing cross bars: To BS 1202-1, galvanized round wire, minimum 75 mm long and 3.75 mm gauge

## 576 Tree pit surfacing - loose fill

1. Surfacing material: Mulch, as section Q28
2. Area: 1.0m diameter circle around individual trees, where space allows a 1.0m radius should be used
3. Depth: Depth will taper from 50-75mm to no more than 25mm over the root-ball surface, ensuring that the root flare and base of the stem, along with any ground cover plants, are not buried. The mulch depth should taper to 20mm where the circle adjoins a footway or highway.
4. Watering: Water soil thoroughly before laying.

5. Installation: Ensure the base of the tree stem is kept free from loose filled material.

## Woodland/ matrix/ buffer zone planting

### 635 Notch planting in uncultivated ground - for native hedgerow planting

1. Notching: Make a vertical 'L', notch.
   1.1. Depth: To accommodate full depth of roots.
2. Planting: Plant native hedgerow stock, close notch with root collar at ground level and firm the soil.
   2.1. Planting density: 5 plants per linear metre

### 680 Setting out

1. Planting density: As per planting schedule on drawing ref: P18-1367_22
2. Layout: As per planting schedule on drawing ref: P18-1367_22

## Protecting/ maintaining/ making good defects

### 710 Maintenance

1. Duration: Carry out the operations in the following clauses from completion of planting until the end of the rectification period.
2. Frequency of maintenance visits: Minimum once every 2 weeks between April to October
3. In the autumn following planting the CA/landscape contractor will prepare a list of all trees which are dead, dying or diseased and are to be replaced during the following planting season. All stock deemed to be dead, dying or diseased within the defects period shall be replaced by the contractor at their own cost.

### 720 Failures of planting

1. Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs / aquatic planting that have failed to thrive.
   1.1. Exclusions: Theft or malicious damage after completion.
   1.2. Rectification: Replace with equivalent plants/ trees/ shrubs / aquatic planting. Species substitutions are not authorised without prior written approval from the Landscape Architect.
2. Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater. Seek approval from the Landscape Architect prior to making replacements. Species substitutions are not authorised without prior written approval from the Landscape Architect.
3. Timing of making good: During the next suitable planting season

### 730 Protective fencing

1. Fencing type: Timber post and wire fence to all hedges (ornamental and native): 75mm round timber posts with spiked end, 800mm above ground, min. 400mm driven below ground, at max 2.5m centres; 3no. tensed wires at max. 200mm centres
2. Erection: On completion of planting.
3. Removal: After planting is well established

## 740 Cleanliness

1. Soil and arisings: Remove from hard surfaces and grassed areas.
2. General: Leave the works in a clean tidy condition at completion and after any maintenance operations.

## 750 Planting maintenance generally

1. Weed control: Maintain weed free area around each tree and shrub.
    1.1. Diameter (minimum): The larger of 1 m or the surface of original planting pit.
    1.2. Keep planting beds clear of weeds: By hand weeding and by the use of approved non-residual herbicides, and by maintaining full thickness of mulch as specified.
        1.2.1. Herbicides for hedgerows : To be applied in April, June and August in accordance with manufacturer's recommendations.
2. Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.
3. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
4. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
5. Trees: Spray crown when in leaf during warm weather.
    5.1. Timing: After dusk.
6. Tree accessories: Check condition of stakes, ties, guards and irrigation and ventilation systems. Stakes and ties must be removed after no more than two growing seasons.
    6.1. Broken or missing items: Replace.
    6.2. Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
    6.3. Ties: Adjust to accommodate growth (if too loose, too tight or if chaffing is occurring) and prevent constriction or abrasion.
    6.4. Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
    6.5. Frequency of checks: At each scheduled maintenance visit.
7. Planting Maintenance Fertilizer: To all beds
    7.1. Timing: March or April
    7.2. Fertilizer: Slow release
        7.2.1. Manufacturer: Miracle Professional tel: 01483 410 210
        7.2.2. New Item: Enmag
    7.3. Application: Spread evenly, carefully incorporating below mulch materials
    7.4. Application rate: To manufacturers recommendations.
8. Mulch : Check and maintain mulch depths as per clause 790
9. Watering: Until well established all shrubs are to be watered during the growing season. Following any dry periods of 7-10 days, soil water content should be assessed and watering undertaken as necessary. Care should be taken to ensure applied water is absorbed into the root-zone and does not run off the surface.
    9.1. Watering - planting areas / hedgerow. : Planting areas are to be brought up to field capacity at each visit. If plants are showing signs of drought stress the watering regime should be reviewed and increase as required.

9.2. Watering - trees:: Tree planting areas are to be brought up to field capacity at each visit and each tree is to receive 40 litres or as required. If trees are showing signs of drought stress the watering regime should be reviewed and increase as required.

10. Litter:: All litter is to be removed from all planting areas during maintenance tasks. Dispose of litter responsibly to a suitable tase disposal site, segregating materials for recycling whenever appropriate.

## 760 Planting maintenance - formative pruning

1. General: Prune to promote healthy growth and natural shape for species and shape for their circumstance. Any damaged shoots / branches, foliage, flowers and extension growth to be pruned as necessary. Prune damaged shoots /branches back to healthy wood.
   1.1. Dead, dying, diseased wood and suckers: Remove.
   1.2. Timing: As appropriate to the species, note, all pruning works to trees, hedgerows and native shrub planting should be avoided during the general bird nesting season of 1st March to 31st August inclusive. Any works required outside of this time period should be subject to checks and advice from an Ecologist to ensure there are no nesting birds present.
   1.3. Trees: Favour a single central leading shoot.
2. Arisings: Remove.
3. Standard: Trees are to be pruned in accordance with good horticultural practice and BS 3998 to maintain healthy well-shaped specimens which are appropriately shaped for their circumstances.

## 780 Maintenance instructions

1. General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the Employer for maintenance of the planting work for one full year: Provide a schedule of any ongoing maintenance problems experienced during the rectification period.

## 790 Final mulching

1. Timing: At end of the rectification period.
2. Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
3. Planting beds: Remulch.
   3.1. Depth:: 75mm
4. Trees: Remulch.
   4.1. Depth / Shape and Size:: 1.0m dia circle around individual trees, where space allows this will be expanded to 1.0m radius. The depth will taper from 50-75mm to no more than 25mm over the root-ball surface, ensuring that the root flare and base of the stem, along with any ground cover plants, are not buried. The mulch depth should taper to 20mm where the circle adjoins a footway or highway. For trees in the highway verge the mulching circle should comprise a rectangle or oval extending to at least 1.5m radially lengthways.

Ω End of Section

# Q40
# Fencing

## Fencing systems

### 210 Wooden post and rail fencing - with dog proof wire mesh

1. Manufacturer: Jacksons Fencing (or similar approved)
    1.1. Web: www.jacksons-security.co.uk
    1.2. Email: sales@jacksons-fencing.co.uk
2. Product reference: Standard Post and Rail
3. Post
    3.1. Type: 1800 x 125 x 75mm treated timber
    3.2. Rail: 3600 x 88 x 38mm treated timber; 3 rails
4. Height: 1200mm
5. Maximum centres of posts: 1800mm

### 430 Timber Knee Rail

1. Description : Full round with scalloped posts timber knee rail
2. Manufacturer: Submit proposals
3. Post: Rounded posts, 1000mm diameter, scalloped to go with full round rail
    3.1. Height: 450mm
4. Rail: Full round
5. Accessories: None
6. Installation : In accordance to manufacturers instructions

### 431 Temporary post and wire fence with netting - to protect seeded areas

1. Height: 1m
2. Type: Post and wire with netting
3. Supplier: Submit proposals

## Gates, posts and stiles

### 510 Field gates and posts

1. Manufacturer: Jacksons Fencing (or similar approved)
2. Size: 3.6m width, 1.2m height
3. Materials: Treated timber
4. Fittings: Lockable latch
5. Method of setting posts: Concrete
6. Accessories: Agricultural wire fencing stock

### 530 Kissing gates and posts

1. Manufacturer: Jacksons Fencing (or similar approved)

1.1. Product reference: Mobility Kissing Gate

2. Standard: To BS 5709.
3. Size: 1.5m width
4. Materials: Treated timber
5. Fittings: Self-closing mechanism
6. Method of setting posts: Concrete
7. Accessories: Agricultural wire fencing stock

### 550 Timber gates - to LLAP

1. Description: Timber gates to LLAP
2. Manufacturer: Jacksons Fencing (or similar approved)
   2.1. Product reference: Playtime gate
3. Standard: To BS 5709.
4. Wood: Treated timber
5. Treatment: As section Z12 and Wood Protection Association Commodity Specification C3.
6. Adhesive: Synthetic resin to BS EN 301, type 1.
7. Workmanship: As section Z10.
8. Fittings: Self-closing finish
   8.1. Finish: Natural

## Accessories - Not Used

## Execution

### 710 Installation generally

1. Set out and erect
   1.1. Alignment: Straight lines or smoothly flowing curves.
   1.2. Tops of posts: Following profile of the ground.
   1.3. Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
   1.4. Fixings: All components securely fixed.

### 720 Setting posts in concrete

1. Standard: To BS 8500-2.
2. Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
3. Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
4. Admixtures: Do not use.
5. Holes: Excavate neatly and with vertical sides.
6. Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.

7. Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

### 730 Exposed concrete foundations

1. Filling: Compact until air bubbles cease to appear on the upper surface.
2. Finishing: Weathered to shed water and trowelled smooth.

### 740 Setting posts in earth

1. Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.
2. Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.

### 760 Nailed wood rails

1. Length (minimum): Two bays, with joints in adjacent rails staggered.
2. Fixing: Nail each length of rail to each post with two 100 mm galvanized nails.
3. Rails with split ends: Replace.

### 770 Site cutting of wood

1. General: Kept to a minimum.
2. Below or near ground level: Cutting prohibited.
3. Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

### 780 Making good galvanized surfaces

1. Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
2. Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

### 790 Site painting

1. Timing: Prepare surfaces and apply finishes as soon as possible after fixing.

## Completion

### 910 Cleaning

1. General: Leave the works in a clean, tidy condition.
2. Surfaces: Clean immediately before handover.

### 920 Fixings

1. All components: Tighten.
    1.1. Timing: Before handover.

### 930 Gates

1. Hinges, latches and closers: Adjust to provide smooth operation. Lubricate where necessary.

1.1. Timing: Before handover.

Ω End of Section

# Q50
# Site/ street furniture/ equipment

## Gates, barriers and parking controls - Not Used

## Site and street furniture

### 219A Timber Bench - 2 person

1. Manufacturer: Furnitubes International Ltd
   1.1. Web: www.furnitubes.com
   1.2. Email: sales@furnitubes.com
   1.3. Tel: +44 (0)20 8378 3200.
2. Product reference: CHS4
3. Type: Cheshunt 2 person bench
4. Method of fixing: Root, 300 mm below ground, set in concrete base

### 219B Picnic Benches - 3 person

1. Manufacturer: Furnitubes International Ltd
   1.1. Web: www.furnitubes.com
   1.2. Email: sales@furnitubes.com
   1.3. Tel: +44 (0)20 8378 3200.
2. Product reference: CHS6
3. Type: Cheshunt 3 person bench
4. Method of fixing: Root, 300 mm below ground, set in concrete base

### 230 Picnic Table

1. Manufacturer: Furnitubes International Ltd
   1.1. Web: www.furnitubes.com
   1.2. Email: sales@furnitubes.com
   1.3. Tel: +44 (0)20 8378 3200.
2. Product reference: CHS T6
3. Type: Cheshunt 6 person table
4. Method of fixing: Root, 300 mm below ground, set in concrete base

### 240 Litter bins

1. Description: Okehampton Redwood Litter Bin
2. Manufacturer: Broxap
   2.1. Product reference: BX17 4030
3. Material: Redwood
   3.1. Finish:
   3.2. Colour:
4. Accessories/ Special requirements:

5. Method of fixing: Bolt down

### 252 Information Board

1. Description: Information board
2. Manufacturer: Timber Play
   2.1. Product reference: 11.50301
3. Material: Treated timber
4. Accessories/ Special requirements: Graphics/design to be considered through consultation
5. Method of fixing: Root fix

### 340 Bespoke sculpture/ landscape art - Gateway feature

1. Artist: Design to be confirmed with artist / signage specialist.
2. Description : Design, graphics and artists to be considered through consultation

### 340 Bespoke sculpture/ landscape art - Wayfinding Public Art

1. Artist: To be confirmed
2. Description: Carved timber feature with vertical element showing distances. Design, graphics and artists to be considered through consultation
3. Method of fixing: Set within feature paving areas

## Installation

### 510 Concrete foundations generally

1. Standard: To BS 8500-2.
2. Concrete: To engineers specification
3. Admixtures: Do not use.
4. Foundation holes: Neat vertical sides.
5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

### 515 Setting components in concrete

1. Holes: 450 x 450 x minimum 300 mm deep
2. Components: Accurately positioned and securely supported.
3. Concrete fill: Fully compacted as filling proceeds.
4. Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
5. Temporary component support: Maintain undisturbed for minimum 48 hours.

Ω End of Section

# Q52
# Play equipment

## General - Not Used

## System performance - Not Used

## Products

### 321 Bouncing Discs

1. Description: Triple-spring bouncing disk
2. Standard: To BS EN 1176-1.
3. Manufacturer: Jupiter Play
    3.1. Product reference: 90611111000
4. Age range: 4-10 years
5. Method of fixing: In ground, as per manufacturers specification

### 322 Tunnel

1. Description: Underground Tunnel
2. Standard: To BS EN 1176-1.
3. Manufacturer: Fahr Industries Ltd
    3.1. Product reference: FIBDT12
4. Age range: from 2 years
5. Method of fixing: Manufacturer's standard

### 324 Willow Dome

1. Description: Willow Dome
2. Standard: To BS EN 1176-1.
3. Manufacturer: Handmade Places
4. Age range: from 3 years
5. Materials: Willow
6. Method of fixing: In ground, as per manufacturers specification

### 324 Timber Stilts

1. Description: Stilts Course
2. Standard: To BS EN 1176-1.
3. Manufacturer: Jupiter Play
    3.1. Product reference: 906110400R
4. Age range: 3 - 12 years
5. Materials: Wood (Robinia, to be FSC Certified)
    5.1. Finish: None
    5.2. Colour: Manufacturer's standard

6. Method of fixing: In ground, as per manufacturers specification

## 325 Climbing Log

1. Description: Climbing log
2. Standard: To BS EN 1176-1.
3. Manufacturer: Jupiter Play
    3.1. Product reference: 906193050R
4. Age range: from 3 years
5. Materials: Wood (Robinia, to be FSC Certified)
    5.1. Finish: None
6. Method of fixing: In ground, as per manufacturers specification

## 326 Fibreglass Play Boulder

1. Description: Fibreglass Play Boulder
2. Standard: To BS EN 1176-1.
3. Manufacturer: Nicros
    3.1. Product reference: Large and medium boulder - colour brown
4. Method of fixing: In ground, as per manufacturers specification

## 335 Scramble Net

1. Description: Scramble Net (on mound)
2. Manufacturer: Jupiter Play
    2.1. Product reference: 906193150R
3. Material: Wood (Robinia, to be FSC Certified)
4. Finish: None
5. Fixing: In ground, as per manufacturers specification

## 336 Climbing Ramp

1. Description: Climbing Ramp (on mound)
2. Manufacturer: Russell Play - Spielart
3. Material: Wood (Robinia, to be FSC Certified)
4. Finish: None
5. Fixing: In ground, as per manufacturers specification

## 337 Balancing Bridge

1. Description: Zigzag Climbing Bridge
2. Manufacturer: Jupiter Play
    2.1. Product reference: 906110200R
3. Material: Wood (Robinia, to be FSC Certified)
4. Finish: None
5. Fixing: In ground, as per manufacturers specification

## 340 Combined play structure

1. Description: Varioset Freising
2. Standard: To BS EN 1176-1.
3. Manufacturer: Jupiter Play
   3.1. Product reference: V01242050
4. Age range: from 6 years
5. Method of fixing: Manufacturer's standard

## 341 Combined play structure

1. Description: Spielanlange Immenstadt
2. Standard: To BS EN 1176-1.
3. Manufacturer: Russell Play
   3.1. Product reference: A113
4. Age range: 3 - 10 years
5. Method of fixing: Manufacturer's standard

## 360 Timber Play Totem Pole

1. Description: Timber Play Totem Structure. Potential for local artist involvement. Design to be agreed through consultation
2. Standard: To BS EN 1176-1.
3. Materials: Timber
4. Size:
5. Height:
6. Method of fixing:

## 390 Spring Mounted Rocker Beam

1. Description: Spring Mounted Rocker Beam
2. Standard: To BS EN 1176-1 and -6.
3. Manufacturer: Jupiter Play
   3.1. Product reference: 906110650R
4. Age range: 3 - 12 years
5. Materials: Wood
6. Method of fixing: Manufacturer's standard

## 420 Tower Slide

1. Description: Stainless steel tower slide with wave (on mound)
2. Standard: To BS EN 1176-1 and -3.
3. Manufacturer: Jupiter Play
   3.1. Product reference: 9023381200
4. Age range: 3-10years
5. Format: Wave

6. Materials: Stainless steel
7. Deck height: 1.0 m
8. Method of fixing: Manufacturer's standard

### 421 Platform Slide

1. Description: Slide Platform (on mound)
2. Standard: To BS EN 1176-1 and -3.
3. Manufacturer: Russell Play
4. Age range: 3-10years
5. Format: Platform
6. Materials: Stainless steel and timber
7. Deck height: 1.0 m
8. Method of fixing: Manufacturer's standard

## Execution

### 710 Play equipment installation generally

1. Standard: To manufacturer's written instructions provided in accordance with BS EN 1176-1.

### 720 Concrete foundations generally

1. Standard: To BS 8500-2.
2. Concrete: Designated, not less than GEN 1 or Standard prescribed, not less than ST2.
3. Admixtures: Do not use.
4. Foundation holes: Neat vertical sides.
5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

### 725 Setting components in concrete

1. Holes: As per manufacturer's specification
2. Components: Accurately positioned and securely supported.
3. Concrete fill: Fully compacted as filling proceeds.
4. Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
5. Temporary component support: Maintain undisturbed for minimum 48 hours.

### 730 Setting components in earth

1. Holes: As small as practicable.
2. Components being fixed: Accurately positioned and securely supported.
3. Buried depth (minimum): As per manufacturer's specification
4. Earth refilling: Well rammed as filling proceeds.

### 740 Preservative treated timber

1. Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.

### 750 Damage to galvanized surfaces

1. Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
    1.1. Materials: Low melting point zinc alloy repair rods or powders made for this purpose or at least two coats of zinc-rich paint to BS 4652.
    1.2. Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

### 760 Site painting

1. Timing: Prepare surfaces and apply finishes as soon as possible after installing components.

## Completion

### 910 Inspection - Post installation inspection

1. Standard: To BS EN 1176-1
2. Timing: 2 weeks prior to date when work is expected to be practically complete
3. Period of notice (minimum): 3 working days.
4. New Item: To be carried out by an independent RoSPA inspector.

### 920 Cleaning

1. General: Leave the works in a clean, tidy condition.
2. Surfaces: Clean immediately before handover.

### 930 Testing

1. Standard: To BS EN 1176-1.

### 940 Labels

1. Standard: To BS EN 1176-1
2. Labels: Provide permanent labelling on all types of play equipment.
3. Location: Where visible when erected on site.

### 950 Documentation

1. Standard: To BS EN 1176-1
2. Contents
    2.1. Copies of test reports.
    2.2. General product information.
    2.3. Installation information.
    2.4. Inspection and maintenance information.
3. Number of copies: 2
4. Submission: 2 weeks prior to date when work is expected to be practically complete

## 970 Operating tools

1. Tools: Supply tools required for operation, maintenance and cleaning purposes.

Ω End of Section

# Q55
# External decks, boardwalks and bridges

## Tendering - Not Used

## General

### 120 Boardwalk

1. Description: Hardwood timber decking boards
2. Width:: 2m or 3.6m (to match bridge width)
3. Structure, other than surfacing: To be constructed using no dig construction
4. Surfacing: Millboard Lasta-Grip Decking in Coppered Oak (or similar approved)

### 130 Footbridge / Pedestrian Crossing Point

1. Description: Hardwood timber decking boards
2. Width: 2m
3. Span: As per drawings / TBC
4. Structure, other than surfacing: Steel girders spanning crossing, set on concrete foundation pads
5. Surfacing: Millboard Lasta-Grip Decking in Coppered Oak (or similar approved)
6. Guarding: Handrails to both sides - to consist of vertical posts attached to steel girders with 3 horizontal rails

### 131 Maintenance / Pedestrian Crossing Point

1. Description: Hardwood timber decking boards
2. Width: 3.6m
3. Span: As per drawings / TBC
4. Structure, other than surfacing: Steel girders spanning crossing, set on concrete foundation pads
5. Surfacing: Millboard Lasta-Grip Decking in Coppered Oak (or similar approved)
6. Guarding: Handrails to both sides - to consist of vertical posts attached to steel girders with 3 horizontal rails

## System performance

### 217 Structural design provided

1. Description: Structural details to be provided by engineers

## Products - Not Used

## Fabrication

### 510 Fabrication generally

1. Design: Complete the detailed design and obtain approval prior to commencing fabrication.

2. Shop drawings: Submit.
3. Structural calculations: Submit.
4. Frameworks: Assemble and brace, including temporary members required for installation.
5. Contact between dissimilar metals: Avoid.
6. Fixings: Fully bolt together. Tighten bolts.
7. Temporary support: Do not subject members to non-design loadings.

## Execution

### 610 Loading

1. Site activities: Restrict, to ensure that design loads are not exceeded, or submit proposals for temporary supports.

### 620 Concrete foundations generally

1. Standard: To BS 8500-2.
2. Mix: Designated concrete not less than GEN 1 or standard prescribed concrete not less than ST2.
3. Admixtures: Do not use.
4. Foundation holes: Neat vertical sides.
5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

### 630 Setting components in concrete

1. Holes:
2. Components: Accurately positioned and securely supported.
3. Concrete fill: Compact as filling proceeds.
4. Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
5. Temporary component support: Maintain undisturbed for minimum 48 hours.

### 640 Setting components in earth

1. Holes: As small as practicable.
2. Components: Accurately positioned and securely supported.
3. Earth fill: Well rammed as filling proceeds.

### 650 Driven posts

1. Post heads: Minimize damage during driving. Finish neatly after installation.

### 655 Erection of prefabricated timber structures on prepared bases

1. Survey: Five days (minimum) before proposed erection date. Check foundations, holding down bolts, etc.
2. Inaccuracies or defects in prepared bases or supplied structures: Report immediately. Obtain instructions before proceeding.

### 657 Installation of pedestals

1. Ensure that surface to accept pedestals is clean and free of debris.
2. Setting out: Mark centre-point of pedestal on substrate surface, with guidelines to ensure square layout.
   2.1. Orientation: Align parallel with adjacent features.
3. Overall movement tolerance (maximum): 3 mm.

### 660 Preservative-treated timber

1. Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.
2. Heavily worked sections: Re-treat.

### 665 Installation generally

1. Fasteners and methods of fixing: As section Z20.
2. Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
3. Temporary support: Do not use stairs, walkways or balustrades as temporary support or strutting for other work.

### 670 Installation of surfacing

1. Heading joints: Kept to a minimum, and formed only as butt joints situated over joists.
2. Length: Each board must span not less than two bays between joists with joints in adjacent boards staggered.

### 672 Installation of slip-resistant products

1. Surfacing: Sound and level. Prepared/ rebated for products.

### 680 Site-painting and staining

1. Timing: Prepare surfaces and apply finishes as soon as possible after installing components.

## Completion

### 950 Documentation

1. Contents
   1.1. General product information.
   1.2. Installation information.
   1.3. Inspection and maintenance reports.
2. Number of copies:
3. Submission:

Ω End of Section

**Town & Country Planning Act 1990 (as amended)**
**Planning and Compulsory Purchase Act 2004**

**Cirencester**
33 Sheep Street, Cirencester, GL7 1RQ
T 01285 641717
Cirencester@pegasusgroup.co.uk
Offices throughout the UK and Ireland

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