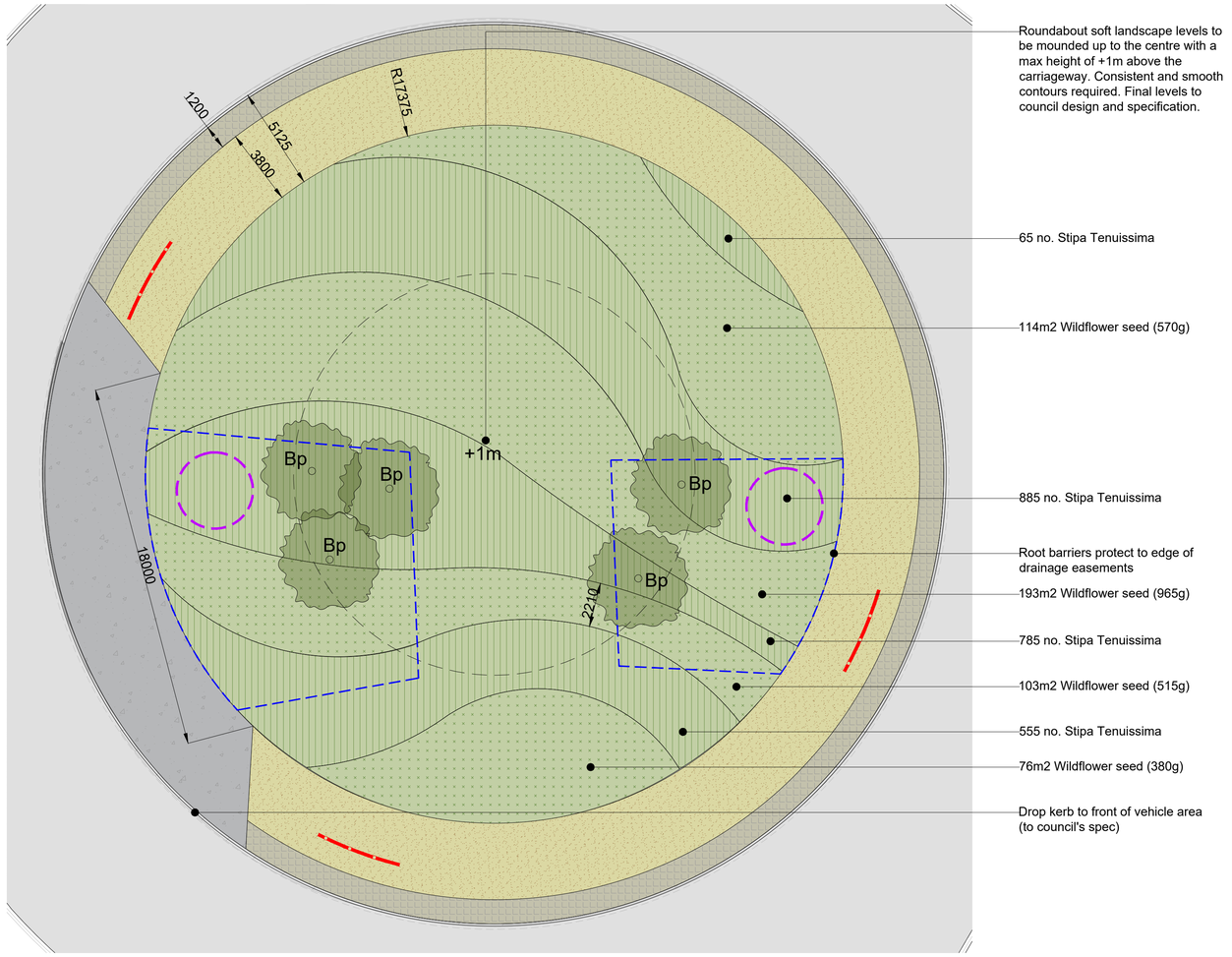


Roundabout soft landscape levels to be mounded up to the centre with a max height of +1m above the carriageway. Consistent and smooth contours required. Final levels to council design and specification.

65 no. Stipa Tenuissima

114m2 Wildflower seed (570g)

885 no. Stipa Tenuissima

Root barriers protect to edge of drainage easements

193m2 Wildflower seed (965g)

785 no. Stipa Tenuissima

103m2 Wildflower seed (515g)

555 no. Stipa Tenuissima

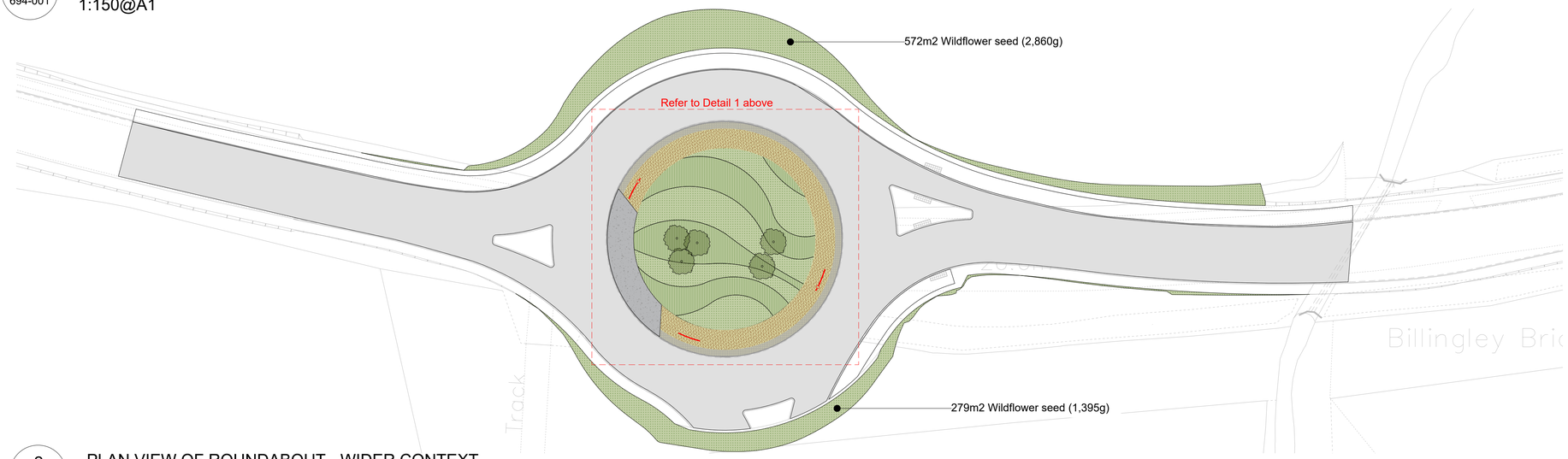
76m2 Wildflower seed (380g)

Drop kerb to front of vehicle area (to council's spec)

1 694-001

PLAN VIEW OF ROUNDABOUT - ZOOM

1:150@A1



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PLAN VIEW OF ROUNDABOUT - WIDER CONTEXT

1:500@A1

Key:

Soft Landscaping

Large Feature Trees (planted in ground)
Heavy Standard, Girth 18-20cm
Height 450-500cm

Biodiverse wildflower planting
50/50 grass to wildflower mix with over 30 different species for wildlife.

Ornamental grasses
Stipa tenuissima

Hard landscape and features

Maintenance area hard surfacing (to council spec)
Bound surface suitable for vehicular overrun:
EXAMPLE 1 - Resin bould gravel, golden colour
EXAMPLE 2 - Coloured tarmac (Ulticolour) Buff

Block paving
To council's specification

Vehicle 'pull-in' area (to council's specification)
Asphalt

Highway kerbs
To council's specification

Asphalt carriageway
Outside of project scope - to council's specification

Chevron signs
To council's specification

Root barriers
Green Blue Urban 'ReRoot Ribbed 1000'
(or similar approved)

Locations for future public art / sculpture
(not part of this submission - to be developed by the council)

SPECIES RICH MEADOW MIX
John Chambers Heritage Dual Purpose 50/50% Grass Seed Wildflower Mix
Sowing rate @ 5g/m²
Meadow buttercup, White campion, Corncockle, Field foget-me-not, Field Pansy, Common Poppy, Cornflower, Bird's foot trefoil, Red Campion, Red clover, Oxeye Daisy, Common dandelion, Hemp agrimony, Common Knapweed, Wild marjoram, Ribbed melilot, Wild migonette, Musk mallow, Devil's bit scabious, Field scabious, Small scabious, Selfheal, Common Vetch, Wild pansy, Kidney vetch, Viper's-bugloss, Teasel, Sweet Rocket, Brown top bent, Strong creeping red fescue, Chewing's fescue

NOTES:

Trees & Services

- Where paths and hard surfacing is proposed within close proximity to trees all construction is to be in accordance with BS 5837: 2012
- Root barriers / root protection measures are to be incorporated where required in accordance with guidelines where existing and proposed trees and vegetation are within 2m of proposed building or trees are in close proximity to services (final details to be agreed).
- Tree and shrub planting proposed within drainage easements to be approved by local water authority. Planting to incorporate root protection measures around services or planting pits to ensure the sewer system is resistant to tree root ingress in accordance with the current Code for Design.
- Contractor shall comply with NJUG publication, volume 4 'Guidelines For The Planning, Installation And Maintenance Of Utility Services In Proximity To Trees' together with BS 5837:2012 Trees in Relation to Construction. Where conflict arises refer to the British Standard

TREES (NATIVE)					
Species	**Height mm**	**Girth**	**Size**	**Spec.**	**Quantity**
Betula pendula (Bp)	450-500	20-22cm	HS	RB, clear stem 175-200mm	5

ORNAMENTAL GRASSES					
Species	**Pot size**	**Height**	**Spec**	**Density**	**Quantity**
Stipa tenuissima	3L	30-40	C	5/m²	2,290

SOFTWORKS SPECIFICATION NOTES

The contractor is responsible to ensure that no products or practices are to be used that do not comply with relevant British Standards, Codes of Practice and Construction Regulations. Contractor to be fully satisfied with locations and off sets of services prior to excavations.

Site clearance generally: Where necessary remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil. Remove stones exceeding 75 mm. Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

SOIL
Site preparation: Where required all existing topsoil and subsoil shall be stripped and stored separately on site. Heaps must not exceed 3m in height and should be used within 12 months in accordance with BS 4425 (Code of practice for general landscape operations).

Soil Sampling - Existing topsoil and inert sub soils, shall be analysed in accordance with BS 3882 to determine available nutrients, texture, organic matter content and pH. Where require, existing soils are to be improved in accordance with BS 3882:2015
Cultivation - Flail existing ruderal vegetation to ground level and remove arisings prior to cultivation. All areas to receive final layers of topsoil are to be de-compacted prior to spreading. Earth works vehicles to be small scale and tracked (loose-tipping) to minimise compaction, however chosen method for decompaction will be site specific dependant on size and soil conditions. Additional care must be taken as to not damage soil structure. All objects and stones over 75mm brought to the surface during decompaction are to be removed from the prepared surface layer. If existing subsoil horizon is found to consist of heavy clay, all proposed seeded areas to be tine ripped to 200mm depth at 300mm centres to increase drainage. Areas to be seeded to be chain harrowed to a fine tilth and lightly rolled to provide firm seed bed. Remove all stones over 30mm dia in any direction. Imported soil material: Import as necessary to make up any deficiency of topsoil and/or subsoil existing on site to complete the work and mitigate deficiencies. All imported material must conform with industry standards BS 8601 (Subsoil), BS 3882 Topsoil) and CLEA limits on heavy metals. Topsoil to be General purpose, 10mm screened and locally sourced to meet BS3882 Top Soil Sandy Loam class. Compliance certificate with relevant British Standard to be provided (for both topsoil and subsoil) prior to installation.

Soil build up: Existing topsoil and subsoil to be retained and reused on site within the landscape scheme where possible. Prior to spreading all topsoil to be screened to remove large stones and other deleterious materials, such as plant roots, leaves and clay. Topsoil to be loose-tipped and spread over de-compacted subsoil/receiving area. The total minimum rooting depth for planting, after settlement, should be: Wildflowers 450mm; Planted areas 600mm; Trees 900mm. Topsoil depths for these areas should not normally exceed 300mm with the following minimum depths for each area: Wildflowers 150mm; Planted areas 300mm; Trees 300mm.

Finished level of topsoil after settlement: Above adjoining paving or kerbs: 25 mm; Below dpc of adjoining buildings: Not less than 150 mm; Shrub areas: Higher than adjoining grass areas by 50 mm; Within root spread of existing trees: Unchanged; Adjoining soil areas: Marry in; Thickness of turf or mulch: Included.)

ADDITIVES
Compost to tree pits: To be as per BS PAS 100: well rotted sterilised spent mushroom compost max. pH 6.7 or Target Treestart compost. The contractor shall provide a Certificate of Analysis to show that the material being supplied complies with the above criteria. Incorporate spent mushroom compost or equivalent approved peat free compost into tree and planting pits at a rate of 3 parts topsoil to 1 part compost, thoroughly mixed together.

Fertiliser to tree pits / planters - Apply slow release fertiliser, Scotts 'Enmag' 4.19.10 NPK or equivalent approved at a rate of 50 gms/sq. metre over topsoil surface and fork into top 225mm spit.

No fertiliser to Wildflower areas or ornamental grasses.

PLANTING
Generally: Minimise trafficking of graded slopes. All plants to be preferably planted between Nov. - March. Nursery stock trees and shrubs to be in accordance with BS 3936 and BS 8545, to be supplied and planted in accordance with British Standards and the Horticultural Association's Plant Handling Guide. Container grown shrubs to be thoroughly watered before planting; trees and bare root shrubs watered after planting.

Times of year for planting: Deciduous Trees, hedges and shrubs: Late October to late March. Evergreen hedges and shrubs: September/ October or April/ May. Container grown plants: At any time if ground and weather conditions are favourable. Watering and weed control to be provided as necessary. Seeding shall take place during April or September, unless otherwise instructed.

Shrub/Hedge planting pits: Timing: Excavate 1-2 days (maximum) before planting. Pit sizes: Wide enough to accommodate roots/boughs when fully spread and 75 mm deeper than root system. Pit bottom improvement Break up to a depth of 150 mm, incorporating 25g of slow-release fertiliser per planting pit. Where existing planting and roots are present plants are to be notch planted to minimise disruption/root damage. Backfilling material: Reuse excavated material. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil. 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.

Tree pit sizes: Standard trees excavate a tree pit 1.2m x 1.2m x 900mm. Break up sides and bottom of pits to a depth of 100mm to ensure free drainage.Tree pit treatment: Soil ameliorant worked into pit bottoms. Pit sides to be scarified and backfilling material to be in accordance with topsoil and subsoil specification. Drainage Layer: Provide 200mm layer washed, clean gravel to base of pits to aid drainage (tree pit to be actively drained if poor draining soil or clay discovered by contractor).

Tree Accessories: Typically trees in soft landscape to be staked unless stated otherwise by the Landscape Architect. Underground guying is recommended for semi mature trees or trees within hard landscape and in public areas. Trees to be staked using 1m long x 75mm dia. round timber stakes (size of stakes to be adjusted to suit size of tree). Cross member to be installed 75mm x 25mm (larger trees will need large cross members). Locate proprietary Hessian ties on cross member to secure tree and prevent rubbing. Short stakes (<1.0m high) with biodegradable Hessian ties are recommended to encourage wind tolerance and prevent rubbing. Tree pit accessories by Green Tech or similar: Underground guying and perforated plastic irrigation/ ventilation pipe to landscape architects approval.

Root Barriers: To be used where indicated on plan. Root barrier by Green Tech or similar to be installed vertically in accordance with supplier recommendations.

Protective fencing/guards: Newly planted areas or individual plants are to include rabbit/deer proof fencing. Either perimeter mesh fencing or individual biodegradable plastic free spiral guards/shelters/tubes are to be installed around all planting where required. Where areas are fenced, mesh to be 1m min above ground and buried 300mm below ground.

Mulching: Approved medium course chipped tree bark composted for at least 4 weeks. Particle size 25-75mm dia, max. 20% fines, pests and disease free and free of Methyl Bromide contamination. Clear any weeds, ensure soil is thoroughly moistened prior to applying mulch. All planting areas inc. trees, hedges and planting beds should receive an even 75mm depth of bark mulch, adjoining edge of mulch to be 15mm min. below adjacent hardstanding to avoid spillage. 50mm depth of mulch is only suitable for higher quality ornamental bark (<5% fines, 5-35mm size etc.). All bark should be FSC certified. Option to use biodegradable mulch mats to control moisture, soil temperature, erosion and weeds. All trees within grass are to have a 1.5m diameter mulch circle.

Cutting In: Where cutting planting beds into existing grassed areas, the surrounding grass shall be protected and made good as necessary. These areas to be made good by preparing and re-seeding area. Seed mixes: John Chambers Lawn/Meadow seed or similar approved.

Seed Preparation and Implementation for Wildflower Areas: No addition of nutrient to soil required. Method to suit soil type, proposed usage, location and weather conditions during and after sowing.
Deeply rip and turn soils within area to be wildflower seeded to bring subsoil to surface and reduce overall soil fertility. Following turning of the soil, wildflower seed areas should be graded and cultivated and all areas brought to a tilth, to the satisfaction of the Contract Administrator, prior to seeding. Any herbiciding instructed, shall comply with all regulations and shall be carried out 21 days prior to seeding. No seed spreading shall take place if ground or weather conditions are unfavourable. The seed shall be sown in two equal sowings, in transverse directions, using the seed mix specified, evenly distributed at the manufacturer's recommended rate. Thoroughly water completed seeding.

Preparation of Seed Bed – Wildflower areas:
The following sequence of operations shall apply following soil turning:-
(i) 1st Harrowing: to produce an even rough grade
(ii) Stonepick: all objects with any dimension greater than 50mm shall be picked off the seed bed and disposed of off site
(iii) Luting: to areas to remove any hollows and to produce fine evenly graded surface standing 25mm above all obstacles and edges
(iv) 2nd Harrowing / Raking: to produce a fine tilth
(v) Cambridge Roll: to produce lightly compacted even surface

MAINTENANCE: GENERAL
Refer to Landscape Management Plan and Schedule for Landscape Maintenance for more detail. 1 year Defects Liability Period applies. All dead or failing plants to be replaced the following growing season. Maintain a weed free bare earth area 600mm dia minimum around individual trees. Herbicide shall only be used where necessary and if use is required it should be a non-residual translocated herbicide and spot applied/applied with spray guard. Application and use to be in accordance with EA guidance. Prior to spraying ensure all spirals are tight to ground level and leaves within spray range are fully enclosed. Arisings: Remove. Trim all edges. Weed control: Substantially free of broad leaved weeds. Method: Application of a suitable selective herbicide. Remove any stones 25 mm in any dimension brought to the surface. Watering: To ensure establishment.

MAINTENANCE: WATERING
Quantity: Wet full depth of topsoil. Application: Even and without displacing seed, seedlings or soil. Frequency: As necessary to ensure the establishment and continued thriving of all plants. Newly seeded areas shall be watered using a fine rose or sprinkler and not lead to oversaturation, disturbance of tilth or washing away of seed.

MAINTENANCE: WILDFLOWER PLANTING
In first year, when the sward exceeds 100mm in height, the first cut shall reduce sward to 50-70mm height. Three subsequent cuts down to 50-70mm height should be carried out when the sward exceeds100mm height. Remove all arisings off site.
2nd year cutting regime and onwards to consist of one single cut in late August or September after seed has been set. Sward to be cut down to 100mm. Following the cut, arisings to be left in situ for 2-3 days before being cleared off site.

MAINTENANCE: ORNAMENTAL GRASSES (Stipa Tenuissima)
Stipa tenuissima is an semi-evergreen grass. In winter plants to be assessed for quantity of dead foliage. If minimal then in April or May, carefully rake to remove any old foliage or seed heads – the old growth should come away easily. If mostly dead foliage or plants are beginning to look messy, cut them back in late winter (Jan / Feb) to 5-10cm from soil. Avoid cutting any new season growth. All arisings to be removed from site.

NOTE: Works to be carried out in accordance with the most up to date and current British Standards referenced within this specification.

Project: ES10 GOLDTHORPE ROUNDABOUT

Client: BARNSLEY METROPOLITAN BOROUGH COUNCIL

Status: TENDER

Title: GENERAL ARRANGEMENT, PLANTING PLAN AND SCHEDULE

Drawn:	Chk'd:	App'd
SSt	RW	SH

Drawing Number: PWP 694 010

Revision: T02

Drawing Scale: As Drawn @ A1

Rev	Date	Detail	Made	Chk'd	App'd
T02	10/03/23	Trees in raised planters removed	RW	SH	SH
T01	29/09/22	DRAFT - First tender issue for comment	RW	SH	SH

Notes:
1. For tender purposes only
2. Not for construction all dimensions to be confirmed on site
3. Based on Layout Drawing - **HD/A635.69/3000/1 ES10 A635 Goldthorpe Roundabout Easement**
4. This drawing covers soft landscape only. Refer to engineers drawings for hard landscape, boundary treatments, site levels and drainage.
5. Build ups/footings to engineers specification.
6. Contractor to be fully satisfied with locations of services prior to excavations.
7. All existing trees to be protected to BS 5837.
8. **Crown copyright and database rights 2022.**

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