**NGS National Green Specification**

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**F23 BOULDER AND TURF HEDGEBANK WALLING**

To be read with Preliminaries/General Conditions A10-A55

100 MODIFICATIONS TO EXISTING HEDGEBANKS:

Allow for making modifications to existing hedgebank walls, increasing widths of openings.

Allow for temporary modifications to existing hedgebank walls, provide temporary support to prevent progressive collapse of remaining walls.

Dismantle one material at a time to enable recovery of materials and segregated storage to ensure reuse in completing the walls in practical.

Take care to protect surfaces of boulders to reduce risk of abrasion and impact damage.

Provide a method statement for handling and manipulating larger heavy stones and other materials.

110 FREESTANDING HEDGE BANK WALLS IN LANDSCAPE:

Location: [Path through car parks, Car park areas]

Reference Drawing(s): [\_\_\_\_\_\_]

Preparation: Turf, topsoil and excavated subsoil to be taken up separately and stored appropriately to allow reuse in the hedge bank wall construction, store soils in 1m3 fork lift sacks until required.

Base: Exposed subsoil,

Basic geometry of wall:

Depth into ground: 200 mm. minimum, to remove topsoil, actual depth to be confirmed on site,

Height above ground: 1200 mm. to top of stones, 1300 mm. to crown of topsoil and turf,

Width at base: 1300 mm. minimum

Width at top: 600 mm. minimum

Batter on both sides: 1.3.5 minimum

Plan arrangement: See Site plans,

Materials:

Outer leaves of walls:

Large stones: well rounded weathered stones following basic geometry of wall with occasional larger stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Small stones: well rounded weathered stones, following the basic profile of wall

Corner and end stones: well rounded weathered stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Jointing: fresh cut turf from the site of the hedge bank wall, to add stability to stones,

Thickness: 40 mm. minimum

Infill: to be back filled as the construction proceeds to provide support for stones and fill all interstices,

Bottom: Drainage layer using as dug free-draining materials, from site excavations if suitable,

Depth: 500 mm. minimum, 1000 mm. maximum

Top: Topsoil from the excavation,

Depth of topsoil to crown (including turf): 600 mm. minimum, 900 mm. maximum,

Top profile: rounded 100 mm. above top stones (including turf)

Hedging:

Species: Quickthorne transplants to BS 3936:Part 1

Density: 10 plants per meter run and staggered.

Turf: fresh cut turf from the site of the hedge bank wall, laid over rounded profile topsoil, cut to fit around hedging plants to cover all topsoil.

111 PAIR OF HEDGE BANK WALLS CREATING ROUTE THROUGH CAR PARK:

Location: [Path through car parks],

Reference Drawing(s): [\_\_\_\_\_\_\_\_]

Preparation: Turf, topsoil and excavated subsoil to be taken up separately and stored appropriately to allow reuse in the hedge bank wall construction, store soils in 1m3 fork lift sacks until required.

Base: Exposed subsoil,

Basic geometry of wall:

Depth into ground: 200 mm. minimum, to remove topsoil, actual depth to be confirmed on site,

Height above ground: 1200 mm. to top of stones, 1400 mm. to crown of topsoil and turf,

Width at base: 1500 mm. minimum,

Width at top: 800 mm. minimum

Batter on both sides: 1.3.5 minimum

Overall width including occasional protruding large stones: 2000 maximum

Plan arrangement: 2000 mm. maximum width, 2000 mm. minimum path between, 6000 mm. overall.

Footpath entrances: break in hedgebank walls emphasised by deep funnel entrance formed by projecting hedgebank walls bringing path to align with fronts of parking bays.

Entrance walls: all as above and

Basic geometry narrows to accommodate and avoid lighting bollards to Q50/193

Basic geometry narrows to accommodate and embrace marker stones

Materials:

Outer leaves of walls:

Large stones: well rounded weathered stones following basic geometry of wall with occasional larger stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Small stones: well rounded weathered stones, following the basic profile of wall

Corner and end stones: well rounded weathered stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Marker stones: taller stones protruding half into and half out of side of hedge bank wall, marking entrances and bookend the threshold stones to Q10/125.

Height: [1500 – 2000] mm. above ground, matching height pairs,

Jointing: fresh cut turf from the site of the hedge bank wall, to add stability to stones,

Thickness: 40 mm. minimum

Infill: to be back filled as the construction proceeds to provide support for stones and fill all interstices,

Bottom: Drainage layer using as dug free-draining materials, from site excavations if suitable,

Depth: 500 mm. minimum, 1100 mm. maximum

Top: Topsoil from the excavation,

Depth of topsoil to crown (including turf): 600 mm. minimum, 1000 mm. maximum,

Top profile: rounded 200 mm. above top stones (including turf)

Hedging:

Species: [Quickthorne transplants] to BS 3936:Part 1

Density: 10 plants per meter run and staggered.

Turf: fresh cut turf from the site of the hedge bank wall, laid over rounded profile topsoil, cut to fit around hedging plants to cover all topsoil.

112 BANKING AND WALL DIVISIONS IN CAR PARK:

Location: [Division between Car park areas between back to back parking bays]

Reference Drawing(s): [\_\_\_\_\_\_\_\_],

Preparation: Turf, topsoil and excavated subsoil to be taken up separately and stored appropriately to allow reuse in the hedge bank wall construction, store soils in 1m3 fork lift sacks until required.

Base: Exposed subsoil,

Basic geometry of wall:

Depth into ground: 200 mm. minimum, to remove topsoil, actual depth to be confirmed on site,

Height above ground: 1000 mm. to top of stones, 1200 mm. to crown of topsoil and turf,

Width at base: 1300 mm. minimum, (1800 mm. maximum)

Width at top: 600 mm. minimum

Batter on both sides: 1.3.5 minimum

Plan arrangement: See Site plans, and Detail drawing,

Overall width of banking, wall and filter drains: 3000 mm.

Filtre drains: 500 d x 300 w mm. to R13/163. both sides.

Basic geometry of wall set 250 mm. away from filter drain, gap filled with topsoil and turf.

Banking: 600 to 850 mm wide, 500 to 700 mm. high at wall face, undulating and incorporating outcrop stones

Materials:

Outer leaves of walls:

Large stones: well rounded weathered stones following basic geometry of wall with occasional larger stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Small stones: well rounded weathered stones, following the basic profile of wall

Corner and end stones: well rounded weathered stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Jointing: fresh cut turf from the site of the wall, to add stability to stones,

Thickness: 40 mm. minimum

Infill: to be back filled as the construction proceeds to provide support for stones and fill all interstices,

Bottom: Drainage layer using as dug free-draining materials, from site excavations, if suitable,

Depth: 500 mm. minimum, 800 mm. maximum

Top: Topsoil from the excavation,

Depth of topsoil to crown (including turf): 600 mm. minimum, 900 mm. maximum,

Top profile: rounded 200 mm. above top stones (including turf)

Turf: fresh cut turf from the site of the banking and wall, laid over rounded profile topsoil, cut to cover all topsoil.

Banking infill:

Bottom: As dug free-draining subsoil,

400 minimum, 600 mm. maximum at wall edge,

tapering to minimum 200 mm. under outcrop stones

Top: Topsoil:

 300 mm. minimum, 500 mm. maximum at wall edge

 300 mm. minimum generally.

Outcrop stones: well rounded weathered stones protruding above top soil and turf.

Turf: fresh cut turf from the site of the banking and wall, laid over undulating topsoil, cut to fit around outcrop stone to cover all topsoil.

113 HEDGE BANK RETAINING WALLS IN LANDSCAPE:

Location: [Car park areas, bookends to car parking bay runs],

Reference Drawing(s): [\_\_\_\_\_\_\_\_],

Preparation: Turf, topsoil and excavated subsoil to be taken up separately and stored appropriately to allow reuse in the hedge bank wall construction, store soils in 1m3 fork lift sacks until required.

Base: Exposed subsoil,

Basic geometry of retaining wall:

Depth into ground: 200 mm. minimum, to remove topsoil, actual depth to be confirmed on site,

Height above ground: 1200 mm. to top of stones, 1300 mm. to crown of topsoil and turf,

Width at base: see plans

Width at top: see plans

Batter on face: 1.3.5 minimum

Plan arrangement: See Site plans,

Materials:

Face of retaining wall:

Large stones: well rounded weathered stones following basic geometry of wall with occasional larger stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Small stones: well rounded weathered stones, following the basic profile of wall

Corner and end stones: well rounded weathered stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Jointing: fresh cut turf from the site of the hedge bank wall, to add stability to stones,

Thickness: 40 mm. minimum

Backfill: to be back filled as the construction proceeds to provide support for stones and fill all interstices,

Bottom: Drainage layer using as dug free-draining materials, from site excavations if suitable,

Depth: 500 mm. minimum, 1000 mm. maximum

Top: Topsoil from the excavation,

Depth of topsoil to crown (including turf): 600 mm. minimum, 900 mm. maximum,

Top profile: rounded 100 mm. above top stones (including turf)

Hedging: See landscape drawings for extend of hedge, other planting and turf,

Species: [Quickthorne transplants] to BS 3936:Part 1

Density: 10 plants per meter run and staggered.

Turf: fresh cut turf from the site of the hedge bank wall, laid over rounded profile topsoil, cut to fit around hedging plants to cover all topsoil.

114 FREESTANDING HEDGE BANK WALLS IN LANDSCAPE BETWEEN 2 FILTRE DRAINS:

Location: [division between back to car park areas],

Reference Drawing(s): [\_\_\_\_\_\_\_\_],

Preparation: Turf, topsoil and excavated subsoil to be taken up separately and stored appropriately to allow reuse in the hedge bank wall construction, store soils in 1m3 fork lift sacks until required.

Base: Exposed subsoil,

Basic geometry of wall:

Depth into ground: 200 mm. minimum, to remove topsoil, actual depth to be confirmed on site,

Height above ground: 1200 mm. to top of stones, 1300 mm. to crown of topsoil and turf,

Width at base: 1300 mm. minimum

Width at top: 600 mm. minimum

Batter on both sides: 1.3.5 minimum

Plan arrangement: See Site plans, and Detail drawing,

Overall width of banking, wall and filter drains: 2500 mm.

Filtre drains: 500 d x 300 w mm. to R13/163. both sides.

Materials:

Outer leaves of walls:

Large stones: well rounded weathered stones following basic geometry of wall with occasional larger stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Small stones: well rounded weathered stones, following the basic profile of wall

Corner and end stones: well rounded weathered stones protruding from the basic geometry of wall, cut out pockets of turf and topsoil to accommodate.

Jointing: fresh cut turf from the site of the hedge bank wall, to add stability to stones,

Thickness: 40 mm. minimum

Infill: to be back filled as the construction proceeds to provide support for stones and fill all interstices,

Bottom: Drainage layer using as dug free-draining materials, from site excavations if suitable,

Depth: 500 mm. minimum, 1000 mm. maximum

Top: Topsoil from the excavation,

Depth of topsoil to crown (including turf): 600 mm. minimum, 900 mm. maximum,

Top profile: rounded 100 mm. above top stones (including turf)

Hedging:

Species: Quickthorne transplants to BS 3936:Part 1

Density: 10 plants per meter run and staggered.

Turf: fresh cut turf from the site of the hedge bank wall, laid over rounded profile topsoil, cut to fit around hedging plants to cover all topsoil.

~~120 STONE AND EARTH OUTER SKIN OF EXTERNAL WALLS OF BUILDINGS:~~

150 SOURCE OF STONES:

Boulders: weathered stone,

Size range: similar to existing to CA approved sample.

Source: to be confirmed to CA.

Colour, shapes and textures: to match existing.

210 CDM & MANUAL HANDLING:

Provide a method statement on manual and mechanical handling of heavy materials over 20 kg.

Appendix/Clause(s) on previous page(s)

NB: NOTES ON EDITING SPECIFICATIONS:

Use as guidance, a stand alone appendix or merge into work section.

Delete all of the Information on this and other pages of guidance notes, excluding the page break above, down to the end of **NBS** compatibility URLs (website addresses), when adding this work section or clauses to a project specification or purchase order.

Edit the clauses by selecting the clauses required, deleting any not required, by editing the [blue text which often describes options available] within square brackets to suit the project; or edit the specification to suit the procurement method.

Remove all square brackets using search for [ and replace with nothing and search for ] and replace with nothing.

Replace blue text with black text by selecting all and choosing auto or black colour text.

There are clauses in Red text in the Specification these are examples of project specific versions of the generic clauses that are included for guidance and are likely to be deleted or edited if they are useful to the project.

Remove any grey tone by selecting all text, and select Format > Borders and Shading > Shading > No fill > Okay.

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**REV Revisions**

|  |  |  |  |
| --- | --- | --- | --- |
| Revision No. | Description | Author | Date |
| A00 | For DRAFT issue to post on website for review | BRM |  |
| A01 | File name changedTerms and Conditions etc. addedMinor format changes | BRM |  |
| A02 | Update file nameUpdate headers and footers, © and start dateReviewed, post on Website | BRM | 08/12/2012 |
| A03 | Updated GreenSpec to NGS previously updated on NGS website | BRM | 16/08/2013 |
| A04 | Created file and added F23 from SRA St Davids | BRM | 03/08/2014 |
|  | Pending |  |  |
|  | Reorganise to Uniclass 2012 elemental classification |  |  |

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**Addenda**

**NBS compatibility**

National Building Specification (NBS) is the industry standard specification library.

NGS’s Green Building Specification (GBS) is designed to complement NBS.

NGS clauses are written specifically to address issues of environmental sustainability.

NBS adopts and develops the Construction Project Information Committee’s (CPIC) classification system Common Arrangement of Work Sections (CAWS) 1998 edition.

GBS adopts and develops the CPIC and NBS versions of CAWS to enable integration into NBS-based specifications.

GBS adopts NBS clause numbering to provide for easy clause assimilation.

CPIC: http://www.cpic.org.uk

CAWS: <http://www.cpic.org.uk/en/publications/common-arrangement-listing.cfm>

NBS: [www.thenbs.com/](http://www.thenbs.com/)