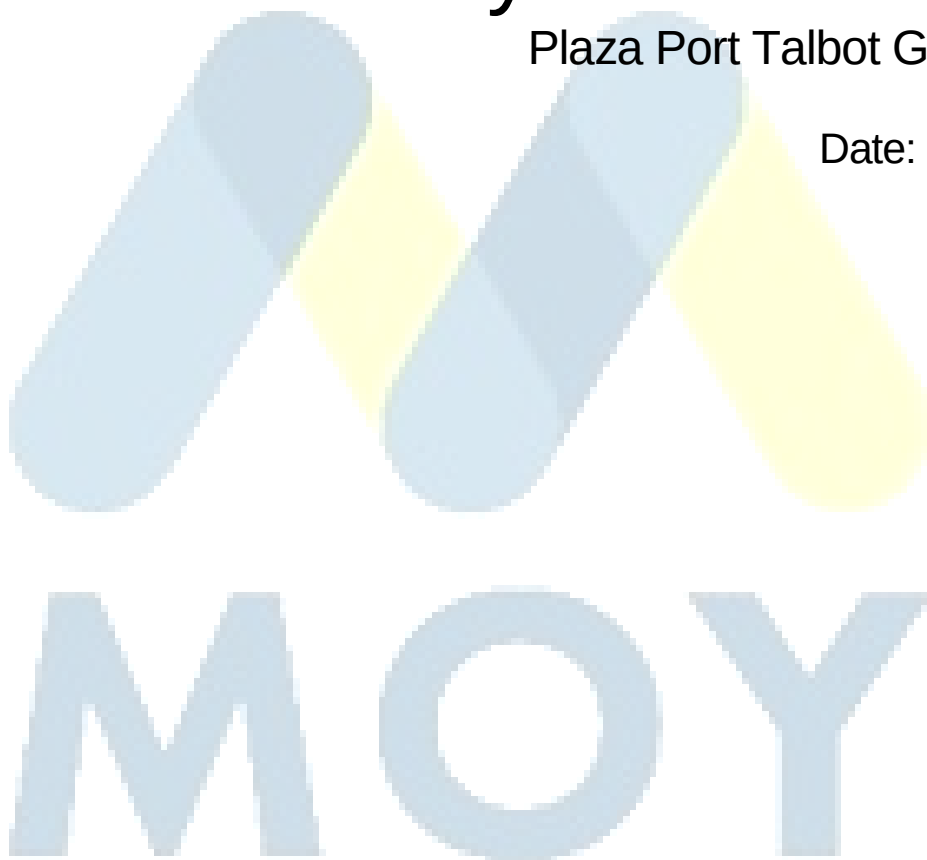


System Overview

Plaza Port Talbot Green Roof

Date: 18/11/2020



SPECIFICATION

System	Mixed Wildflower Seed
Project Plan	New Build
Roof Construction	Warm

Moy Materials Specifications are offered on the condition that the specifier accepts responsibility for ensuring that each specification is appropriate for its intended purpose, and fully compliant current building regulations.

Project Registration

Please note that changes made to the content of this document may impact suitability and eligibility to meet Moy Materials requirements for guarantee.

Moy Materials request registration of your project. This means we can confirm the suitability of the specification and implement our project monitoring service and procedures. At this stage the guarantee duration, terms of contract, and conditions can be confirmed prior to tender.

Technical support

This specification is not bespoke and therefore could require further input from Moy Materials specification managers to meet project specific requirements. Consequently, we strongly recommend contacting Moy Materials for specific project advice thus ensuring the specification meets the requirements of your project and importantly, remains eligible for guarantee as Moy Materials cannot be held liable for any errors or omissions.

To ensure you get the right roof package, our fully compatible accessory items such as roof lights, rainwater outlets, and trims etc. are readily available and can be easily incorporated into the specification when required.

MOY Materials reserves the right to amend information and product specifications without prior notice.

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NBS SECTION Q37 - DESCRIPTION OF WORKS

Q37 covers the design and installation of the Moy Materials landscaping system, including the various related elements i.e. separation, protection, and drainage layers, substrates, Moy Materials supplied planting and accessories such as inspection chambers, trims etc.

It invokes clauses from related sections for waterproofing, insulation, landscaping and maintenance as necessary for a complete system.

It is intended for use on projects where the detailed design is completed by the specifier (architect or landscape architect) with technical assistance from the manufacturer as required and should be read in conjunction with any project specific drawings provided.

SCOPE OF WORKS

- Moy Materials Intensive Green Roof System.
- Related Moy Materials system accessories.

This section does not include:

- Construction of the structural deck.
- Moy Materials waterproofing system (refer NBS Section).
- Irrigation
- Proprietary rainwater drainage / plumbing (refer NBS section R10).

To be read with Preliminaries / General Conditions.

GENERAL

110 Extensive Green Roof:

- **Landscape finish:** Mixed Wildflower Seed
- **Substrate:** As specified
- **Slope:** 25° Maximum
- **Slip Layer:** Loose laid rolled out in two layers, with sheets staggered. Installation as clause 745.
- **Protection layer:** Moy Materials protection layer. Installation as clause 750D
 - **Water storage/drainage layer:** Moy Materials drainage / water storage panel. Installation as clause 770I.
 - **Board fill:** Mineral Drain granular fill. Installation as clause 775A.
 - **Filter membrane:** Moy Materials Filter Fleece. Installation as clause 780A.
 - **Growing medium:** Intensive Substrate, depth as specified by the client, above the filter fleece. Installation as clause 790E.
 - **Landscaping depth:** 150mm

130 EXTENSIVE GREEN ROOF:

- **Landscaping finish:** Wildflower Seeded roof
- **Substrate:** As specified
- **Slope:** 25° Maximum
- **Waterproofing System:**
Please contact Moy Materials for confirmation of suitable waterproofing system.
- **Protection layer:** Moy Materials protection layer. Installed as clause 750D.
- **Water storage / Drainage layer:** Moy Materials drainage / protection layer. Installation as clause 770B.
- **Filter Membrane:** Moy Materials Filter Fleece.
- **Landscaping depth:** ca. 150mm minimum (excluding vegetation).
- **Vegetation:** Wildflower seed

Accessories:

- Moy Materials Inspection chamber to be installed over all internal rainwater outlets within soft landscaping areas. The lid of the chamber must be level with, or higher than the surrounding landscaping. For landscaping exceeding 100mm, additional height adapter must be used to achieve the required chamber depth, with the chamber lid being at least level with the surrounding landscaping or higher. Installation as clause 830.
- 40-60mm round washed pebble vegetation barrier provided around all protrusion, as clause 460. Installation as clause 840.
- Adjustable Paving Supports
- Paving as Specified by principle design

Additional requirements: 210, 710, 715A, 720, 910, 915A, 916, 920, 930.

PRODUCTS

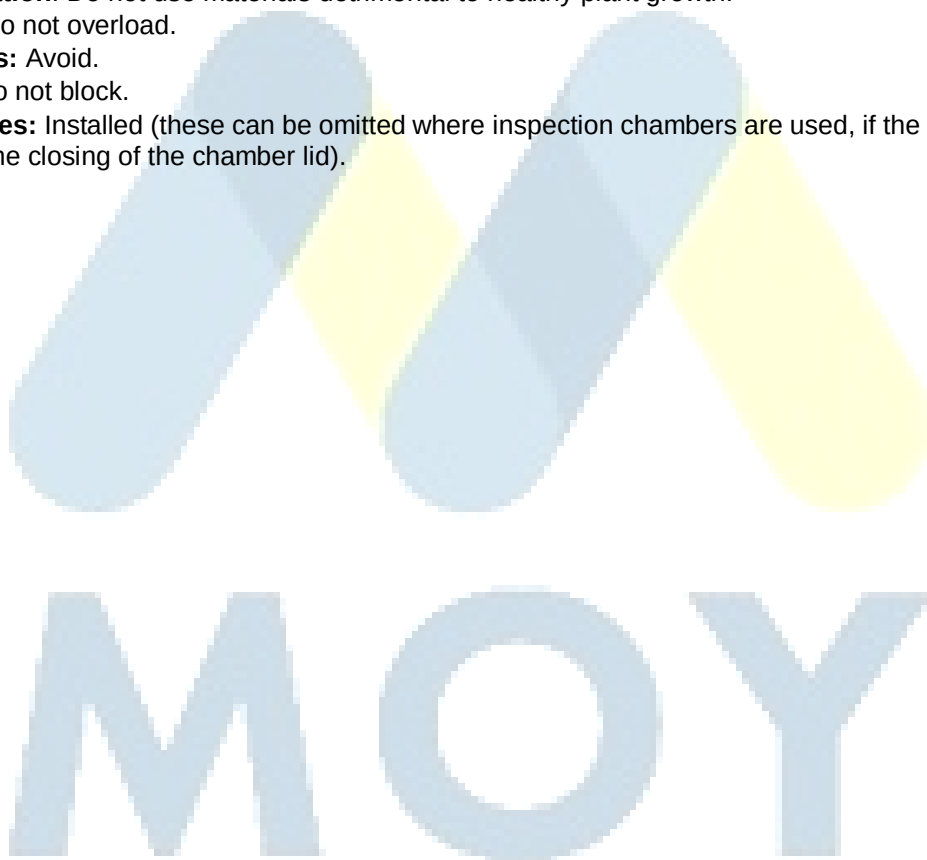
460 PEBBLE BALLAST

- **Type:** Washed, round pebbles.
- **Size:** Graded 40-60mm and free from fines and sharps.

EXECUTION

710 INSTALLATION GENERALLY

- **Preparation:** Clear all surfaces of debris.
- **Timing:** After certification of waterproof membrane integrity.
- **Surface condition:** Visually inspect waterproof membrane, report any damage.
- **Faults in waterproof membrane:** Report.
- **Contamination:** Do not use materials detrimental to healthy plant growth.
- **Storage:** Do not overload.
- **Point loads:** Avoid.
- **Outlets:** Do not block.
- **Outlet grilles:** Installed (these can be omitted where inspection chambers are used, if the grille cap height obstructs the closing of the chamber lid).



715A GREEN ROOF RELATED REQUIREMENTS

The following are vital to the accurate pricing, correct installation, and ultimately the long-term life of a green roof, and must, therefore, be included within the specification and tender documents:

- **Loadings:** It is assumed that the architect or advisors have satisfied themselves that the roof structure and deck are suitable to receive the dead load of the proposed green roof system and landscape both during construction and on completion of the works.
- **Additional protection:** A planned or contractual delay between the installation of the waterproofing and landscape will almost certainly necessitate additional/increased protection to the waterproofing. This protection may be temporary or permanent. The responsibility and cost of this possible extra protection should be clearly included within the tender documents.
- **Detailed drawings:** Correct detailing design and construction is essential to the long-term life of the green roof. It is essential, therefore, that detail drawings illustrating for the construction are included with the tender documents, in order to enable the contractor to tender accurately.
- **Minimum upstand height requirements:** The waterproofing should be taken up all abutment upstands, pipes, detailing protrusions etc. a minimum of 150mm above finished landscape surface level to comply with British Standards and current code of practice BS8217:2005.
- **Provision for living products in hot weather conditions:** During hot weather conditions, living products such as plants, turf, sedum blankets etc. must be laid on the day of delivery to site. With regard to sedum blankets or turf, any rolls not installed should be laid out and kept watered prior to final installation.
- **Watering / Irrigation:** Adequate provision for watering the installed any form of planting must be in place on site before the product is installed. Irrigation systems if fitted should be operational. Initial watering should be by surface sprinklers to water in the fertiliser, where this is specified. All watering should be carried out in strict accordance with the watering requirements and guidance documents.
- **Final Inspection:** No landscaping work should be installed until Moy Materials have carried out a final inspection to the waterproofing and have passed this as suitable for guarantee. It is the responsibility of the roofing contractor to advise and organise this inspection with Moy Materials. We cannot guarantee any waterproofing that has been landscaped without this inspection having been carried out and passed as acceptable.
- **Damage risk form other trades:** No landscaping should be installed while the roof area is subject to other site traffic. Moy Materials will carry out an inspection of the completed roof 4-6 weeks following installation and any site related damage by others will be reported to the client. Moy Materials accept no responsibility whatsoever for damage to the product or the installation caused by site work carried out by others after the landscaping has been installed.
- **First year maintenance:** The contractor must price into his tender the cost of post-installation maintenance for a minimum period of 1 year to ensure the handover of a flourishing green roof.

720 ADVERSE WEATHER

- **Unfinished work:** Secure from damage and wind uplift.
- **Conditions:** Do not install or work with frozen materials.

LANDSCAPING INSTALLATION

750D PROTECTION LAYER INSTALLATION

- **Installation:** Protection Fleece, rolled out and laid loose. Where landscaping installation is not imminent, loose laps should be taped with gaffer tape to eliminate the trip hazard.
- **Joints:** Minimize.
- **Overlaps (minimum):** Laps to be 150mm
- **Openings in landscape restraint kerbs:** Where these kerbs are present (roof slopes above 5°), the protection layer should be cut away from the openings/ gaps to avoid impeding drainage.
- **Upstands:** Sufficient protection mat must be allowed for so that it may be installed to all abutment upstands and edge details, in accordance with the manufacturer's instructions. Extend to full height of the upstand and secure in place by using a lead or fabricated metal counter-flashing.

770B DRAINAGE LAYER INSTALLATION

- **Extent:** Continuous over entire designated roof area.
- **Fitting:** Fully bonded with Moy PU adhesive. Boards are to be tightly overlapped at the edges and staggered.
- **Upstands:** Fit closely around penetrations and outlets.

780A FILTER FLEECE MEMBRANE INSTALLATION

- **Joints:** Minimize.
- **Overlaps (minimum):** 150mm
- **Fitting:** Loose laid over drainage layer in accordance with manufacturer's recommendation.
- **Upstands (soft landscaping):** Extend up, between vegetation barrier and growing medium and trim flush with finished surface level.
- **Upstands (Hard landscaping):** Extend to top of perimeter abutments and trim flush just below finished surface level.

790E GROWING MEDIUM INSTALLATION

- **Handling:** Minimize.
- **Conditions:** Handle in the driest condition possible. Do not handle or install when wet or frozen.
- **Layers:** Start by applying two equal layers, building up to required maximum depth.
- **Sequence:** Gently firm each layer before spreading the next. Allowance should be made for any settlement that may occur. It is recommended that measuring stick markers of the required depth be used around the roof area to ensure that a minimum acceptable thickness of growing medium is achieved.
- **Supply:** Depending on size and access of the project the 'substrate' can be supplied by various methods i.e. Tipper, Silo lorry (pumping directly onto the roof area), Big bags, or sacks. Prior to costing this element of the installation the 'Approved Contractor' must contact Moy Materials so that they may advise on the best solution on any specific contract.
- **Important note regarding alternative substrates:** If alternative substrates are required (e.g. topsoil...etc.), Moy Materials does not take any responsibility for the performance of such substrates supplied from an alternative source. We recommend that alternative substrates should be covered by a technical data sheet and certified in writing as suitable to support the system and plants specified. Saturated weight loadings must be provided directly from the supplier of the substrate and should be the subject to a structural engineer's approval.

800B VEGETATION BLANKET INSTALLATION

Handling blankets:

- **Timing:** Lay within 36 hours of delivery.
- **Method:** laid manually – two-man operation preferable
- **Excessive stacking:** Not permitted.
- **Material loss (maximum):** 3% of total surface area.
- **Growing medium condition:** Thoroughly watered
- **Watering:** Thoroughly water using surface sprinklers immediately after installation and substrate dressing, ensuring that the blankets and substrate are fully saturated before moving on to the next area.

830 INSPECTION CHAMBER INSTALLATION

- **Location:** Install centrally over rainwater outlets.
- **Orientation:** Align parallel with adjacent features.
- **Surround:** Using 40/60mm grade washed pebbles; the inspection chamber must be surrounded by a 300mm vegetation barrier surround to prevent unwanted growth obstructing the drainage system.
- **Positioning:** Never place directly on the waterproofing membrane – see options below-
- **Intensive / extensive soft landscaping:** Placed directly on to the drainage / water storage layer.
- **Inverted roof with pebble ballast:** Placed directly on the vapour permeable membrane or filter layer.
- **Decorative aggregate finishes:** Placed directly on the protection layer or vapour permeable membrane / filter layer

Important Note: Ensure that a suitably sized hole has been cut out of the underlying drainage to allow water to freely flow into the outlets.

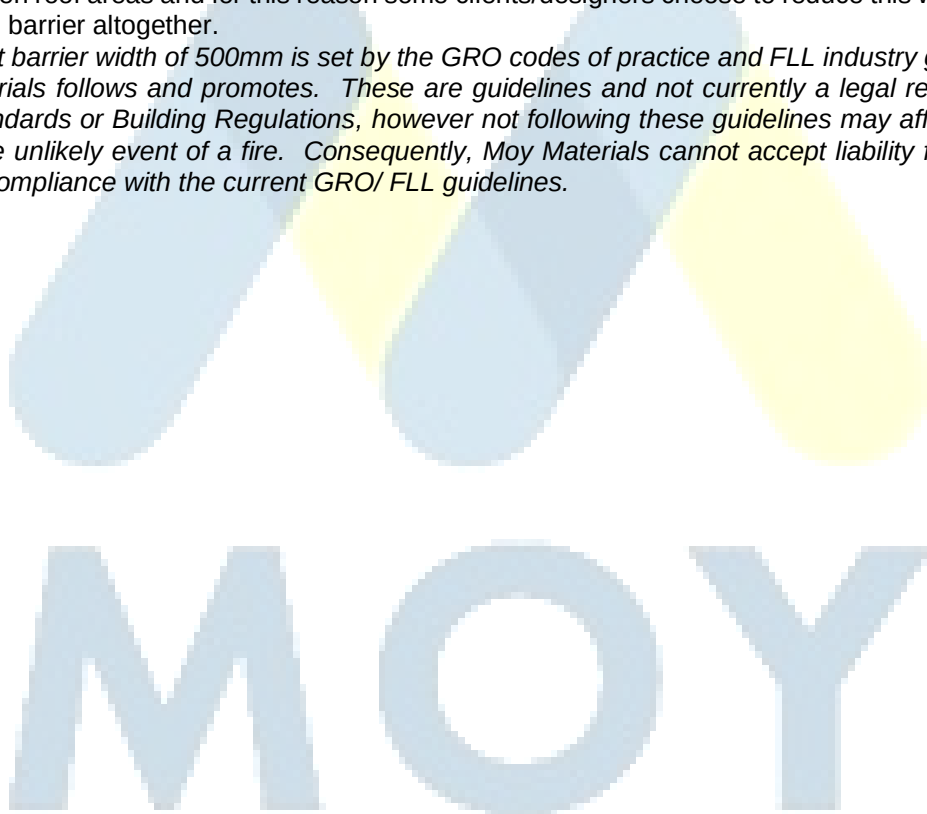
- **Box gutters and gullies:** Where a box gutter is to be constructed, provision should be made to accommodate the 250mm diameter of the inspection chamber. The front support leg of the chamber will need to be removed (see installation guide) for the unit to fit inside a box gutter /gully. We recommend that all box gutters are constructed to a minimum finished width of 500mm to ensure that the support feet of the inspection chamber sufficiently clears the angle fillets within the gutter sole and leaves space to dress the pebble vegetation barrier around the main body of the chamber.

840 VEGETATION BARRIER / DRAINAGE BARRIER

- A minimum 300mm pebble vegetation barrier must be provided to all perimeters and roof penetrations and protrusions i.e. surrounds to roof light or plant upstand kerbs, rainwater outlets, soil vent pipes, man-safe posts etc. as specified.
- Every 40m, there is a 30mm high barrier constructed of non-flammable materials or a one metre wide strip of solid paving, gravel or pebbles.
- We recommend 40/60mm rounded river washed pebbles. Stones or aggregates with sharp edges must not be used i.e. flint. Other materials may be used, but only after consultation and agreement with Moy Materials.
- At all open drainage perimeters, drainage trim must be used to contain the vegetation barrier.
- For extensive green roofs where sedum blanket is specified, the vegetation barrier must cover the edges of the blanket by a minimum of 100mm in order to protect the exposed edge of the blanket against wind uplift and substrate erosion.

- **Vegetation barriers removal or reduction of the recommended width:** Pebble vegetation barriers function as a fire break between potentially flammable dry vegetation and abutting construction materials that are also potentially flammable to prevent fire spreading. These can be seen as an aesthetic issue for smaller green roof areas and for this reason some clients/designers choose to reduce this width or otherwise remove the barrier altogether.

The current barrier width of 500mm is set by the GRO codes of practice and FLL industry guidelines, which MOY Materials follows and promotes. These are guidelines and not currently a legal requirement under British Standards or Building Regulations, however not following these guidelines may affect an insurance claim in the unlikely event of a fire. Consequently, Moy Materials cannot accept liability for issues arising from non-compliance with the current GRO/ FLL guidelines.



COMPLETION

910 INSPECTION

- **Timing:** Before handover.
- **Give notice (minimum):** 5 days.

915G ESTABLISHMENT WATERING REQUIREMENTS

- It is the responsibility of the landscaping contractor to liaise with the main contractor/ building owner to provide initial watering to ensure that the growing medium, planting or turf does not dry out after planting/laying.
- An adequate mains supply of sufficient pressure must therefore be available and operational prior to the planting.
- Permanent Irrigation systems where installed, must fully operational where these are to provide initial as well as post-installation watering. The end user should therefore be briefed as to the operation of the installed system.
- Moy Materials accepts no responsibility whatsoever for the condition of installed planting that is not properly watered or irrigated following landscaping works.

916 POST INSTALLATION MAINTENANCE

- The installing contractor should price into the tender, the cost of carrying out post-installation maintenance for a contract period to be agreed with the client's representative. Following completion of the landscaping installation and handover, the responsibility for future on-going maintenance of the green roof planting becomes the responsibility of the building owner or the Main Contractor, where this element forms part of the contract.

920 COMPLETION

- **General:** Leave the works in a clean, tidy condition.
- **Surfaces:** Clean immediately before handover.
- **Outlets:** Clean and clear of obstructions.
- **Completed green roof:** Protect from adjacent or high level working.

930 DOCUMENTATION

- **Timing:** Submit at handover.
- **Contents:**
 - Manufacturer's guarantees and warranties.
 - Procedures for maintenance of the green roof.
 - Record drawings showing the location of planting and associated features.
- **Number of copies:** As required by client.

Moy Materials reserves the right to amend information and product specifications without prior notice. All reasonable care has been taken to ensure that the information is current and correct at the time of issue. Please note that any future regulation changes could result in this specification requiring an update. The specifier is responsible for ensuring that this specification information is still current prior to issue, as Moy Materials can accept no liability for any resulting errors or omissions.