

Landscape Management Report Crown Street Phase 3, Manchester

Prepared on behalf of Renaker Build LTD

Report PR-TPM-G710-RP-GRD-4156-502
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Figure 1 - Key Reference Plan



1.0 Introduction

1.1 General

TPM Landscape, Chartered Landscape Architects have undertaken the planning submission information relating to the landscape design for both public and private areas of the Crown Street Phase 3 development. The landscape management report has been produced to ensure that future management objectives are achieved. This document will form part of the planning application for the proposed development and once approved will provide guidance for the establishment, maintenance and future management of all external landscaped areas and planting around the site.

1.2 Aims of the report

This report has been developed to establish long term management objectives and practices for all of the external areas associated with the development.

The report presumes that all of the external areas have been built in accordance with the following drawings;

PR-TPM-G710-PL-GRD-4156-101 (Landscape Layout)

PR-TPM-G710-PL-GRD-4156-201 (Planting Plan)

A clear understanding of the design aims and intentions will help to ensure that the landscape reaches maturity in the form in which it has been designed.

1.3 Site Maintenance and Responsibility

The company responsible for maintaining the landscape will be responsible for inspecting the site and for keeping a logged record of inspections, faults and rectified works. The managing agent is required to appoint a Landscape Maintenance Contractor, whether that be the original installation contractor or a separate party. All contractors should be registered with BALI (British Association of Landscape Industries).

1.4 Objectives

The overall objectives for the maintenance include the following;

- Ensure that site boundaries are maintained in a safe and secure condition;
- Allow shrubs and flowers to reach their species potential to ensure that they produce flowers and seed heads and grow in their natural shape and form to provide texture and interest;
- Maintain the trees within and around the periphery of the site in a safe condition to promote longevity of the tree and reduce the risk of failure. Ensure that any works on trees or and shrubs considers the local wildlife (foraging opportunities, bird nesting season etc.);
- Keep all hard surfaced areas, paths and courtyards in a good state of repair and free from any potentially dangerous arisings that could cause a slip or trip hazard; and
- Ensure that all structures, furniture and features are looked after and maintained in a good state of repair and safe condition so that they do not fail or have the potential to cause harm to the residents.

The report shows operation objectives for a five year period to ensure that the establishment of the scheme is achieved. It is assumed that the management company will continue to maintain the landscape beyond the 5 year period and will be broadly in line with the operations described at year 5.

2.0 General Description

2.1 Existing Context

The site is located to the south of Manchester City Centre and bordered by Silvercroft Street, Crown Street, Melbourne Street and Owen Street with Great Jackson Street running through the centre creating a break between the eastern and western parts of the site.

2.2 Site Proposals

Crown Street Phase 3 will be a residential development comprising of four towers of residential space, commercial space, amenity space, landscaping, and public realm as well as 3 levels of basement car parking.

The development proposals offer large areas of public realm that are fully accessible, creating an attractive and inviting place that has a unique character and a sense of place. The identity of the site will be strongly influenced by the tall slender built form of the buildings, the landscape palette and the tree selection.

The landscape will become a public resource for the City of Manchester, visitors, existing residents, existing office workers, residents that will occupy the Crown Street Phase 3 development and future residents of the wider Great Jackson Street Masterplan.

2.3 Core Public Realm

The proposed buildings sit within the landscape where at ground floor they create active frontages with either commercial space, concierge or residents lounges. The towers and facilities block have visually permeable facades that allow the public to view internal activity.

Where commercial retail units are located at ground floor the landscape is open to allow for the flexibility of cafe spill out space that would animate the interface between building and public realm.

The central public realm is designed to be an open lawn with the line of formal beehive trees. The large lawn area creates a relaxation and activity space, and combined with the surrounding retail units it will offer a desirable space for both, residents and the public. All the public realm materials are specified as high quality to ensure durability.

The landscape proposals are open and inviting allowing visual and physical permeability through the scheme whilst providing gathering and seating spaces that encourage social engagement. Lighting is an integral part of the proposals to ensure that the development is adequately lit during the hours of darkness. Covered and opened walkways are provided around the perimeter of the landscape.

2.4 Private Roof Garden

Four resident's roof gardens are proposed, one for each tower with access via lift in the building. Seating and relaxation areas are provided across the terrace allowing residents to choose the desired spot depending on the need and weather.

The interventions on the roofscape will utilise intensive green roof technology to create outdoor rooms with seating, planting, and lawn. Pergola structures are located on the roof garden to provide shelter.

The roof garden benefits from views over the core public realm and over Crown Street Phase 2. The roof gardens will be visible from the ground floor as they are on lower floors of the building. The terraces will also be visible from occupants in the towers above and in adjacent developments. Terraces will benefit from sheltered locations made by the overhang of the tower above allowing seasonal use.

3.0 Health and Safety

The following potential hazards have been identified within the proposed development site which may have implications for maintenance operations:

- Contractors working on the site should make themselves aware of the location of underground services, defining the exact locations with the Statutory Authorities prior to commencing works below the surface;
- Working in areas used by resident's, staff, public whether on foot, in wheelchairs or vehicles;
- Working in areas used by people who may be disabled, vulnerable to change or visually impaired; ensuring paths are kept clear at all times and potentially dangerous tools or machinery is not left lying around,
- The use of chemicals known to be hazardous to humans and animals;
- Working at elevated positions;
- Lifting heavy objects and working with heavy machinery. The use of chainsaws, working at height;
- The possibility that hazardous material may be deposited in or inadvertently left in areas requiring cleaning (needles, medication, dog foul etc).

Methods for reducing the potential site risks are well established and are common practice of competent contractors. The contractor is expected to identify the hazards associated with any maintenance operations they proposed, together with an assessment of the risks involved and methods for reducing the risks. The Risk Assessment should be recorded and retained for reference in the future if necessary.

3.1 Site Operations

All operations on site are to be carried out by suitably qualified operatives with appropriate safety clothing. The maintenance contractor is to adhere to the latest guidance on safe working practice, including information from the recognised industry body, the local authority and the government Health and Safety Executive. The maintenance contractor is to carry out all operations with regard to the safety and welfare of the general public, private and public property, native flora and fauna and Statutory Services.

3.2 Disposal of materials from site

All, rubbish, leaves, grass and general arisings removed from the site are to be deposited at a licensed tip in the appropriate section.

4.0 Hard Elements

Maintenance operations are to be carried out in order to provide a clean, inviting and safe environment for all users of the site. For the purposes of this report it is assumed that all the works required by the planning approval have been carried out in accordance with the approved drawings.

All paving edges, walls and street furniture should be safe, robust and in good condition. Any damage arising from the management and maintenance works must be reinstated to the original condition and in accordance with the relevant specification of the client.

All hard works to be installed under the recommendations of the manufacturer's instructions. Hard works should not be carried out in undesirable weather conditions.

4.1 Hard Surfacing (footways, roads, terraces)

Maintenance objective

Footways and roadways are to be maintained in a safe and clean condition free from any defects or debris which could potentially cause a trip hazard. Surfaces are to be level and free from trip or slip hazards.

Inspections

A formal visual inspection is to be carried out by the maintenance contractor at 6 monthly intervals or following reports from the client that surfaces require repairing. A report of the inspections and rectified works should always be logged.

An annual inspection of the paving grouting should be carried out to ensure the stability of the footways and roadways are maintained.

Contractors Maintenance Operations

Surfaces are to be kept free of litter, mud, arisings, deleterious material, algae, and hazardous obstructions. Surfaces are to be uniform in appearance, a level surface and constructed from a homogenous material, free from ruts, grooves, cracks, hollows and pot-holes (holes greater than 75mm in diameter and 10mm depth).

Paved areas are to be repaired within 1 week of a reported fault unless the potential hazard is severe (trip hazard) in which case the area is to be cordoned off and repaired at the earliest available opportunity.

All surfaces and foundations are to be repaired to the original specification, unless otherwise agreed with the Local Planning Authority or Statutory Authority.

One operation per year (annually) - **1**

One operation every 6 months – **2**

One operation every month - **12**

No.	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
1	Visual inspection of footways, roadways and terraces	2	2	2	2	2
2	Cleaning of Paving – sweep pathways and remove litter and debris	12	12	12	12	12
3	Clean paved areas annually by relevant washing techniques for granite paving and concrete block paving (acid and bleach should not be used)	1	1	1	1	1
4	Apply sealant to paving (as required after cleaning)	a/r	a/r	a/r	a/r	a/r
5	Apply herbicide to weeds if appear between paving joints, when weeds have been suppressed hand how out and refill mortar joints	2	2	2	2	2
6	Check grouting and reinstate where necessary	1	1	1	1	1
7	Ensure water is draining from footway to avoid pooling	2	2	2	2	2
8	Clear snow of pathways after adverse weather (as required)	a/r	a/r	a/r	a/r	a/r

4.2 Metalwork - Gates, Fences Balustrades and Handrails

Maintenance objective

Gates, fences, balustrades, and handrails are to be maintained in a safe and clean condition and gates in good working order. Gates which are intended for controlled access only are to remain locked and should not be left open during the maintenance operations unless supervised.

Inspections

A formal visual inspection is to be carried out at 6 monthly intervals or following reports from the client that a fault or damage has occurred. A report of the inspections and rectified works should always be logged.

Maintenance Operations

Gates, fences, balustrade, handrails, and bollards are to be kept free of litter, deleterious material and hazardous protuberances. Ensure reflective banding on the bollards remains intact and repair when necessary. Surfaces are to be maintained uniform in appearance and coated in a homogenous paint, stain, enamel, or plastic coating in accordance with the original specification.

Gates and railings are to be repaired within 1 month of a reported fault, unless the potential hazard is severe, in which case the area surrounding the fault should be cordoned off and the boundary made secure, the fault should be repaired at the earliest available opportunity.

Repaint railings and gates as required if the paint starts to flake off and look unsightly to the same specification as the original ensuring that any rust is removed and the surface prepared and primed before the paint is applied.

These works will be the sole responsibility of the contractor and at all times the site boundaries should be maintained in sound condition and the site secure.

One operation per year - **1**

One operation every 6 months – **2**

One operation every month - **12**

No.	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
9	Visual inspection of metalwork – repair if required	2	2	2	2	2
10	Clean metalwork	1	1	1	1	1
11	Repaint (as required)	a/r	a/r	a/r	a/r	1
12	Strip back and repaint metalwork to match existing (every 5years)					1

4.3 Edges - Planters, Steps and Walls

Maintenance objective

All 'edges' should be maintained in a safe and clean condition. All cladding, copings and steps should be secure.

Inspections

A formal visual inspection is to be carried out at 6 monthly intervals or following reports from the client that a fault or damage has occurred. A report of the inspections and rectified works should always be logged.

Maintenance Operations

All 'Edges' are to be kept free of litter, deleterious material, and hazardous protuberances. Surfaces are to be maintained uniform in appearance and with seamless levels vertically and horizontally for copings and cladding. All steps to be level across the tread length to avoid trip hazard. Grout mortar between steps, cladding and copings to be inspected and topped up where necessary with matching colour.

Faults are to be repaired within 1 month of a reported fault, unless the potential hazard is severe, in which case the area surrounding the fault should be cordoned off, the fault should be repaired at the earliest available opportunity.

Re affix cladding, copings and steps as required and any failures to be replaced to the same specification as the original.

One operation per year - **1**

One operation every 6 months – **2**

One operation every month - **12**

No.	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
13	Visual inspection of edges and repair, regrout as necessary to original specification	2	2	2	2	2
14	Clean edges areas annually and remove detritus / chewing gum-stiff brush and soapy water	1	1	1	1	1
15	Apply anti-graffiti coating to raised edges if misuse becomes apparent	1	1	1	1	1
16	Apply non residual herbicide to spot treat weed problems. Hand removal after herbicide has taken effect. Contract to submit proposals on the herbicide to the management company.	2	2	2	2	2

4.4 Timber Elements, Furniture and Bins

Maintenance objective

All timber elements, furniture and bins should be maintained in a safe and clean condition. Surfaces should be smooth to the touch (avoiding potential for splinters), fixings secure and flush with the finished surface, and the wood should be sound avoiding the potential for failure due to rot.

Inspections

A formal visual inspection is to be carried out at 6 monthly intervals or following reports that a fault or damage has occurred. A report of the inspections and rectified works should always be logged.

Maintenance Operations

Any timber elements that have originally been stained should have the original wood stain colour (or similar approved) reapplied annually in the spring to rejuvenate the appearance of the wood. All bins should be emptied regularly and the surface of the bin cleaned to ensure staining does not occur.

All timber used on the site should be hardwood to ensure longevity.

The timber should be repaired within 1 month of a reported fault, the section of wood that is damaged or rotten should be replaced with a piece of timber of the original specification. Where the fault may cause a risk to the user of the site the item should be cornered off until the fault is repaired.

These works will be the sole responsibility of the contractor and at all times the furniture and structures should be maintained in sound condition and the site secure.

One operation per year - **1**

One operation every 6 months – **2**

One operation every month - **12**

No	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
17	Visual inspection of benches – repair if required	2	2	2	2	2
18	Clean any metalwork components	1	1	1	1	1
19	Empty smoking bins	12	12	12	12	12
20	Clean smoking bins	2	2	2	2	2

5.0 Soft Elements

For the purposes of this report it is assumed that all planting has been carried out inline with the approved planning drawings and any failed plants or trees replaced by the original contractor at the end of the 12 months Rectification Period, the contractor should refer to the associated local authority planning conditions regarding the replacement period for any dead/dying trees;

5.1 Proposed Trees

Objectives

Trees will play an important role in providing structure to the landscape proposals and will provide valuable assets to the site, provide screening, wind mitigation, and contribute to the visual amenity of the local area. Therefore, it is important that they are given the best chance of successful establishment.

Inspections

Inspect on an annual basis when the trees are in full leaf to ensure that the trees are thriving, and record defects requiring remedial works.

Maintenance Operations

Newly planted trees take some time to establish, and until this occurs, they are subject to competition from weeds. Any weeds should be removed by hand from the base of each tree and 75mm deep mulch maintained around the trunk.

If the trees show signs of poor growth or reduced vigour an application of the appropriate fertiliser can be applied. If the trees do not respond to a treatment of fertiliser, further investigations should be carried out, including the ground conditions for signs of compaction, contamination, poor quality topsoil. Remediate any problems uncovered with the soil. Should the remediation works not resolve the problem a replacement tree may need to be planted.

During establishment trees will require regular watering particularly during prolonged dry period, mulch should also assist in retaining moisture within the soil. Water the trees minimum once a week during periods of limited rainfall over May-September (during the first full growing season) ensuring that the soil is fully saturated. Ensure all irrigation pipes are free from debris. Water shall be applied at 40litres per individual tree. Where water restrictions apply (hosepipe bans, drought orders) an alternative supply of water shall be used if possible. As many of the trees are planted within a podium landscape they may be more prone to being dry. The contractor should monitor the trees throughout the year.

Underground tree guys should be inspected twice annually as part of the general maintenance visits and adjusted accordingly. Damaged guys should be replaced. Guys will require adjusting as it is likely to take 3 to 5 years for the trees to establish dependant on stability, wind conditions and growing conditions.

Pruning of young trees should not generally be required unless they have dead or diseased branches. In such cases the tree branch should be pruned back (using a sharp clean knife) to an outward facing bud whilst maintaining the natural shape of the tree. Trees with a topiary form should have trimmed to shape each spring.

These works will be the sole responsibility of the contractor and at all times trees should be maintained in good health and in a safe condition.

One operation per year - **1**

One operation every 6 months – **2**

One operation every month - **12**

No.	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
21	Visual inspection of trees – replant if necessary	2	2	2	2	2
22	Inspect trees after strong winds (as required)	a/r	a/r	a/r	a/r	a/r
23	Water in periods of dry weather / or extreme microclimate areas	a/r	a/r	a/r	a/r	a/r
24	Replace dead and dying trees to original specification during the next planting season	1	1	1	1	1
25	Remove and dispose of accumulations of winter leaves	1	1	1	1	1
26	Weed control and tidying at base of tree	2	2	2	2	2
27	Prune in spring	1	1	1	1	1
28	Inspect tree guying, repair and adjustment	2	2	2	2	2
29	Apply Slow-release fertiliser	1	1	1	1	1

5.2 Proposed Shrub Beds

Objectives

The shrub beds should have total vegetation cover with no gaps in order to minimise maintenance requirements, and to provide a neat and tidy appearance to the public and private garden spaces. The pruning operations should be carried out under guidance of a horticulturally qualified manager, with a view to allowing the shrubs and herbaceous plants to achieve their species potential in terms of form, flower and structure.

Inspections

Inspect the shrub beds annually and record gaps which need filling with additional plants, areas thinned, or pruning operations to encourage growth to fill gaps. Where there has been a significant failure of plants to thrive, carry out investigations to locate the source of the problem and consult the landscape architect prior to replacement planting.

Maintenance Operations

Newly planted areas take some time to establish. Until this occurs, young plants are subject to competition in their root zone from any weeds. During this time weeds should be removed by hand and the bark mulch should be maintained to the original specified depth (75mm) until the canopies meet. After which weed growth should be more suppressed and only localised weeding should be required.

During establishment all the plants will require regular watering particularly during prolonged dry periods. Water the shrub beds min once a week during periods of limited rainfall over May-September (during the first full growing season) ensuring that the soil is fully saturated. Watering should be undertaken by low pressure hose sprinkler or evenly sprayed over the whole area at a rate of 25litres/m². Ensuring watering is not undertaken during the heat of the day to avoid scorching of the plants.

Shrubs which grow over paths or obscure sight lines should be pruned. Should individual species grow excessively during the first five years, pruning should consist of the removal of individual branches to maintain the natural shape of the plant or selective thinning.

Routine annual pruning of shrubs should not be required within the first three years, although some of the herbaceous plants and flowering shrubs should be maintained in accordance with the list below to encourage new growth and longer flowering periods;

Herbaceous Plants General; these are the plants which generally have soft stems and will die back in the winter months. Any dead stems and leaves should be tidied up in the spring when the threat of frost has gone. Old and dead vegetation can be cut with secateurs back to the base or gently pulled by hand, to encourage the new growth to push through, arisings should be disposed of in the green waste. Allow seed heads to remain on the plants for winter interest and insect habitats. Some herbaceous plants can be spilt and replanted if they start to become open or scruffy.

Grasses; Seed heads on the grasses should be allowed to remain on the plants throughout the winter for visual interest. In the spring for deciduous grasses cut back old seed heads and any dead vegetation to encourage new growth.

One operation per year - **1**

One operation every 6 months – **2**

One operation every month - **12**

No.	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
30	Visual inspection of Shrubs and Perennials – replant if necessary	2	2	2	2	2
31	Weed during establishment	2	2	2	2	2
32	Water in periods of dry weather (as required)	a/r	a/r	a/r	a/r	a/r
33	Replace dead and dying plants to original specification during the next planting season	1	1	1	1	1
34	Remove dead foliage and old flower stems	1	1	1	1	1
35	Where plants exhibit poor growth apply fertiliser	1	1	1	1	1
36	Lift and divide congested groups in Spring	/	/	1	1	1
37	Reapply bark mulch and retain at 75mm depth	1	1	1	1	1
38	Clear snow of planting (as required)	a/r	a/r	a/r	a/r	a/r

5.3 Proposed Hedges

Objectives

The hedges will help to provide structure and wind mitigation within the development.

Inspections

Inspect the hedges annually and record gaps which need filling with additional plants or trimming to encourage growth to fill gaps. Record if there are any areas of significant failure to thrive which may require remedial works to the soil.

Maintenance Operations

Trim on an annual basis during the spring to promote bushy growth during year 1-4.

After the hedges have established lightly trim annually back to 1m height. To prevent weed growth, maintain a 75mm depth of bark mulch at the base of the hedge until the hedge has established, fertiliser application should be avoided unless there are specific localised areas of poor growth.

During establishment the hedge will require regular watering particularly during prolonged dry periods and strong winds. Water the hedge min once a week during periods of limited rainfall over May-September (during the first full growing season) ensuring that the soil is fully saturated.

These works will be the sole responsibility of the contractor.

One operation per year - **1**

One operation every 6 months – **2**

One operation every month - **12**

	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
39	Visual inspection of hedge	1	1	1	1	1
40	Weed control during establishment	1	1	1	1	1
41	Replace dead and dying plants to original specification during the next planting season	a/r	a/r	a/r	a/r	a/r
42	Lightly trim top and sides to maintain desired height (retain at 1m height)	a/r	a/r	a/r	a/r	a/r
43	Water during establishment/ prolonged dry periods	a/r	a/r	a/r	a/r	a/r

5.4 Proposed Lawn

Objectives

A grass mixture designed to create a hardwearing turf that is shade and drought tolerant. The turf will be located on a podium and in shady conditions throughout the year. Grass areas should be well maintained at all times as overgrown and patchy grass can be unsightly.

Inspections

Lawn can be inspected as part of the regular maintenance operations, although it should be formally inspected annually to assess requirements in terms of topdressing, over seeding etc.

Maintenance Operations

Remove any litter or leaves before cutting. Arising's should be removed from site.

Water the freshly laid turf 2 times a day in the first week, and then 2-3 times a week for the next 3-4 weeks. Do not allow the turf to dry till it is established.

To provide the formal appearance desired, following the initial year of its creation, the lawn should be cut regularly to a minimum height of 70mm through the growing season. Avoid mowing the grass when it's very wet, frozen or when it's hot.

A fertiliser application to be applied only as required, either as a spring feed for shoot growth or as an autumn feed for root growth using the appropriate feed application. Do not apply any weed control or feed during prolonged hot and dry weather.

In addition, these applications should compensate for any areas of poor growth or excessive wear. An application of selective herbicide should be made during early summer to prevent any weed species from having a detrimental effect to the appearance of the sward and to prevent any infestation becoming severe.

In periods of dry weather conditions, it may be required to water the grass at a rate of 15litres/m2. Ensuring watering is not undertaken during the heat of the day to avoid scorching of the grass.

Other maintenance applications, which will be required from time to time, include the following: topdressing, overseeding, scarifying, spiking, moss removal etc to alleviate common problems such as thatch, compaction, poor drainage, malnourishment etc. These items should be addressed in the annual check.

These works will be the sole responsibility of the contractor.

One operation per year - **1**

One operation every 6 months – **2**

One operation every month - **12**

	Maintenance Objectives	Year 1	Year 2	Year 3	Year 4	Year 5 +
44	Visual inspection of grass	1	1	1	1	1
45	Weed control and fertiliser	1	1	1	1	1
46	Topdressing, over seeding, scarifying, spiking, moss removal	a/r	a/r	a/r	a/r	a/r
47	Cut – once established	a/r	a/r	a/r	a/r	a/r
48	Water during establishment/ prolonged dry periods	a/r	a/r	a/r	a/r	a/r

6.0 Handover Procedures

The maintenance period will run concurrently with the rectification period so it may be prevalent to have the same contractor for both the Construction Side of the operations and the Maintenance Contractor, to help avoid disputes. After the rectification period the management and maintenance objections need to remain in place for the following operational years of the development site.

To ensure a smooth handover between management contract companies a clear documented record of works will be required.