

PICK EVERARD

Feasibility Report
for
Demolition of Existing MSCP
Covent Garden, Leamington



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I.0 Introduction

I.1 Background

Due to reduced occupancy levels, increased anti-social behaviour and potential high repair and on-going maintenance costs, Warwick District Council have decided to demolish its existing Covent Garden MSCP in Leamington.

In order to maintain parking on the site the Council have decided to continue its use as a surface site until such time as it is redeveloped.

The existing levels and ground floor structures of the MSCP give rise to a number of options in respect of the levels and surface finishes of the new surface car park. These can be summarised as follows:

1. Demolition of the MSCP and crushing of site won material to fill the 'basement' level, which presently forms the ground floor slab of the MSCP creating a flat surface site at the same level as the existing surface site and level 1 of the MSCP
2. Creation of a surface car park with hardcore, tarmacadam, concrete (retention of existing groundbearing slabs) or a combination of all
3. Demolition of the existing car park and retention of the existing split level groundbearing slabs forming a surface car park on different levels
4. Retention of the lowest suspended levels of the MSCP

The following also need to be considered and accommodated within the works as necessary:

- The existing pedestrian link bridge over Tavistock Street is to be removed
- The existing electrical substation on the car park needs to be protected and retained during the demolition

The Council have also expressed a desire to retain the operation of the existing surface site in front of the MSCP as far as possible during the demolition works.

I.2 Purpose of this Report

The purpose of this report is to consider and provide further detail around the options including the preparation of budget costs.

It will also provide outline programme information.

The Options considered are outlined in Section 2.0 with costs summarised in Section 2.5. A full cost report is included in Appendix A. This report should be read in conjunction with those costs.

Indicative programme information is included in Section 3.0.

Section 4.0 summarises the key matters, risks and sensitivities to be noted when considering each of the options.

2.0 Options and Costs

2.1 Option A

Demolition of the MSCP including breakout and removal of the existing groundbearing slabs (MSCP ground floor and level I) and foundations.

Site won materials will be crushed and used to:-

- Backfill where foundations are removed
- Backfill the MSCP basement ground floor level
- Form sub-base as required to the MSCP level I

As the crushed site won material will generally have a 6F2 classification it won't be suitable as a parking surface. A 'topping' layer of 150 mm DOT Type I hardcore which is more readily compacted will be imported to form the final parking surface to the former MSCP areas.

It will not be possible to mark out parking bays or circulation arrows on a hardcore surface. As well as reducing overall parking capacity due to the irregular parking it will also mean that circulation routes cannot be defined. This is more of an issue on this site which will be a double width footprint.

Due to the need to retain the existing substation and existing level of Tavistock Street in relation to the level the perimeter wall to Tavistock Street will be retained as the boundary wall to the new surface car park.

Optional costs are provided for the retention of the existing groundbearing slabs to the ground floor and level I. This can be considered to reduce cost but the impact on future development options and drainage requirements should be considered.

Retention of both slabs would offer the greatest cost saving. It would also result in retention of a hard surface to level I.

2.2 Option B

As for Option A but with the creation and retention of hard surfacing instead of a hardcore parking surface.

This option is based on the installation of a tarmacadam surface to the backfilled MSCP ground floor area with the retention of the existing slab to the level I area.

The benefit of this option is an improved parking surface with the ability to clearly mark out bays and circulation routes. It also reduces the risk associated with unforeseen issues in the ground. It does however result in consideration being given to the following drainage issues:

- Draining of the hard paving including interceptor requirements
- Planning discharge rate implications

An optional cost is provided for only installing macadam to the drive aisles of the ground floor area. The benefit of this is the ability to mark parking bays ('T's on the macadam) as well as the provision of a defined circulation. It would also reduce the drainage design implications to this level.

2.3 Option C

Option C represents the lowest cost option as it retains both groundbearing slabs as the parking surface.

Whilst it would provide for the improved operational and user benefits noted above it would also require consideration of drainage design as also noted above.

It also needs to be considered if a multi-levelled surface site would be acceptable.

2.4 Option D

The Council requested consideration of an option to retain the lowest two suspended split levels to the MSCP.

In order to do this the whole car park would need to be deconstructed (as opposed to being mechanically demolished) in the same way that it will need to be over the substation. The cost of doing this would be prohibitive and so the option was discounted and not considered in detail.

2.5 Cost Summary

The costs for all options are included in the Options Budget Cost Report included in Appendix A.

These are summarised as follows:

	Option A	Option B	Option C
	1,093,000.00	1,162,000.00	1,002,000.00
Retain all groundbearing slabs	-80,000.00		
Retain level 1 slab	-36,000.00		
Macadam to drive aisles only		-45,000.00	
Heras fencing in lieu of solid timber hoarding	-40,000	-40,000	-40,000

3.0 Programme and Sequencing

3.1 Programme

Indicative high level programme durations are noted below:

- Design & Survey Works: 4 weeks (subject to selected option)
- Service Disconnection Applications: 8 weeks
- Tender Preparation: 1 week
- Tender Period: 3 weeks
- Contractor Lead-in: 4 weeks
- Section 80 Notice Application Period: 6 weeks (to run concurrently with procurement)
- Contract Period Demolition: 16 weeks
- Contract Period Civils Works: 6 weeks (subject to selected option)

After allowance for concurrent working and integration of the above the following overall periods are considered reasonable:

- From instruction to proceed to start on site: 10 – 12 weeks
- Construction Period: 20 - 22 weeks (depending on scope of works/option selected)

No allowance has been made for an extended period of agreement with the substation operator which could impact the overall pre-commencement programme.

3.2 Sequencing and Methodology

It is anticipated that the majority of the MSCP will be demolished mechanically in sections and in a manner that will allow for the continued operation of the existing surface car park. The Demolition Contractor will however require the closure of the first row of parking bays and drive aisle from the perimeter of the car park to establish a safe working area. It will also require another area of approximately 20 no parking bays for a site compound/storage area.

The follow-on construction works will require a similar area but the surface car park can be re-opened sequentially as these works are completed with the initial focus being on completing works adjacent the existing surface site first.

Works adjacent Tavistock will require footpath and road closures to provide adequate protection zones and areas to work.

The works to remove the pedestrian link bridge and areas of MSCP above the substation will be undertaken by more manual deconstruction with the use of high level access equipment. This will require further road and footpath closures to Tavistock Street including the corner running perpendicular adjacent the substation.

4.0 Risks and Sensitivities

4.1 General

The following section has been prepared to outline the primary risk and sensitivities associated with the works and which should be noted when considering and identifying the preferred option.

4.2 All Options

1. Prolonged agreement on works above and protection of the substation impacting pre-commencement programme
2. Design of structural strengthening works associated with roof retention to the substation
3. Exposure of hidden asbestos
4. Planning requirements associated with new lighting installations
5. Requirement for any service diversions in or around the demolition area
6. Partial removal only (over the road) of the pedestrian link bridge

4.3 Variant Options

When considering the other options, each of the following apply to varying degrees:

1. If breaking out groundbearing slabs and removing foundations, the impact of abnormal ground conditions or hidden structures on cost and programme.
2. Implications of stone finish to new surface site (bay and line markings, maintenance of the area)
3. Implications of variant finishes across the new surface site. These could include combinations of stone, macadam and concrete dependant on which option is progressed
4. If retaining or installing hard surfaces the improved operation and user benefit
5. If retaining or installing hard surfaces the potential drainage design (including interceptors) and planning discharge rate implications
6. If retaining or installing hard surfacing (including foundations) the impact on future redevelopment works
7. Final and potentially variant levels of completed surface parking

Appendix A

Budget Cost Options Report





PROJECT: Covent Garden MSCP
CLIENT: Warwick District Council
JOB NO.: 230123
DESCRIPTION: Demolition of MSCP

DATE: 20.01.23
COST NO: 1
GIFA: 11,400 m2
SPACES: 470 no.

FEASIBILITY COSTS

Ref	Item	Option A Backfill with Reclaimed Material	Option B Macadam Surfacing	Option C Retain Existing Slabs and Levels
1.0	Demolitions and Alterations	836,000.00	781,000.00	731,000.00
2.0	Surfacing Works	49,000.00	108,000.00	12,000.00
3.0	Barriers and Handrails	26,000.00	26,000.00	26,000.00
4.0	Lighting Installations	49,000.00	49,000.00	49,000.00
5.0	General Works			
5.1	Wall to Tavistock Street	4,000.00	4,000.00	4,000.00
5.2	Substation	25,000.00	25,000.00	25,000.00
5.3	Services	5,000.00	5,000.00	5,000.00
6.0	Drainage Works		45,000.00	45,000.00
	SUB-TOTAL	994,000.00	£1,043,000.00	£897,000.00
7.0	Preliminaries	24,000.00	39,000.00	25,000.00
8.0	Risk Allowances	50,000.00	50,000.00	50,000.00
9.0	Fees and Surveys	25,000.00	30,000.00	30,000.00
	TOTAL	£1,093,000.00	£1,162,000.00	£1,002,000.00

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SCOPE OF WORKS

Option A: Demolition of MSCP including removal of all groundbearing slabs and foundations. Backfilling former ground level to form flat surface site with hardcore surface finish

Option B: As Option A but laying macadam surfacing to former ground level. Former Level 1 retained floor slab

Option C: Demolition of MSCP but retaining all groundbearing slabs and foundations. Retaining existing levels

ELEMENT	SCOPE
1 Demolition	Demolition of car park and link bridge comprising: <ul style="list-style-type: none"> a. Traditional mechanical demolition of the majority of the car park with the link bridge (over road only) and area of the retained substation to be carefully deconstructed from scaffold b. The removal of the concrete slabs to split ground levels (Ground and Level 1) to a depth not exceeding 200 mm deep. c. The removal of existing foundations of the structures, from ground floor slab level, down to a depth not exceeding 1.5 m and backfilling with site won crushed 6F2 d. Crushing of site won materials to 6F2 and backfilling Ground Floor void. Disposal of excess e. Removal of asbestos identified in the Tersus Reinspection Report dated 4 August 2021 f. Demolition Notice and road closure applications and fees
2 Surfacing	<p>Option A: Importing and laying 150 mm DOT Type 1 to the top of the reclaimed fill to form the new parking surface.</p> <p>Option B: 30 mm hot rolled asphalt wearing course on 70 mm dense bitumen macadam basecourse</p> <p>Option C: Reline retained slabs</p> <p>All Options: Relining existing surface site</p>
3 Barriers and Handrails	Installation of combined vehicle impact barrier and 1.1m high handrail fall protection to the Tavistock Street perimeter. Cost includes for bases in ground due to hardcore surfacing
4 Lighting	Installation of additional lighting to surface site to meet CIBSIE recommended lux levels
5 General Works	<p>Wall to Tavistock Street: Remedial works to the retained wall to Tavistock Street following completion of the demolition</p> <p>Substation: Remedial works to retained slab/roof following demolition. Installation of additional support to retained roof slab following removal of beam</p> <p>Services: Disconnection of existing services</p>
6 Drainage	Options B & C: Installation of drainage below hard surfacing
7 Preliminaries	Site management, set-up, welfare and protection for non demolition works
8 Risk	Allowance for design and construction risk
9 Fees and Surveys	QS, Structural Engineering and Principal Designer Fees. Asbestos survey.

Basis of Costs

- 1 The costs exclude VAT.
- 2 The costs have been forecast to 3rd ¼ 2023.
- 3 Costs are based on non Framework procurement. The demolition works will be a standalone enabling project undertaken directly by a demolition Contractor with follow-on completion works undertaken by a general/civils Contractor. Both procured competitively.

It is anticipated that procurement through a Framework would increase costs by 20 - 25%.

- 4 It has been assumed that the preference would be for as much demolition work as necessary to be undertaken as part of this project to reduce costs of any future redevelopment of the site. In Option A reductions in costs can be made for retaining the groundbearing slabs and foundations. An approximate saving for retaining both slabs would be £80,000.00. Retention of the slab to level 1 only would be an approximate £36,000.00 saving.

It should be noted when considering this option that:

- a Survey and design work would be required to confirm viability and cost, particularly maintaining levels as well as drainage requirements
 - b Retaining the level 1 floor slab would result in different finishes across the new surface car park (tarmacadam to the existing surface car park, stone to the central area and concrete to the rear)
- 5 It has been assumed that the Level 1 floor slab is groundbearing. Additional implications and costs would need to be considered if this is not the case.
 - 6 Assumptions have had to be made on the works required to retain the sub-station. It has been assumed that the preference will be to retain the existing floor slab of the deck above as the roof to the sub-station. Structural strengthening following removal of the beam below are anticipated. Works will also be required to the slab perimeter. Provisional allowance for this work has been made but may be subject to adjustment following completion of additional survey and design works.
 - 7 The removal of the link bridge is based on removal over the road (Tavistock Street) only.
 - 8 It has been assumed that power will be available locally for the new lighting.
 - 9 It is unclear whether planning consent will be required for lighting improvement works and drainage discharge
 - 10 It should be noted that the marking of lines for delineation of parking spaces and circulation will not be possible on stone parking bays. Partial tarmacadam surfacing of drive aisles only could be considered.
 - 11 Option B includes for installation of macadam surfacing to the filled basement area and retention of the existing level 1 concrete floor slab.

A reduction in Option B for installing macadam to the drive aisles only could be considered. This would result in an approximate £45,000.00 reduction. This would also have benefits in respect of drainage design

- 12 No allowance has been made for treating or removal of any contaminated ground discovered during breakout and removal of groundbearing slabs and foundations
- 13 The cost for separating the site/working areas from public areas is based on the use of solid timber hoarding. Costs for all options could be reduced by approximately £40,000.00 if the use of Heras fencing is considered acceptable.
- 14 Costs for the following items will be subject to adjustment following additional surveys, receipt of additional information, receipt of quotations and/or the completion of additional design works:
 - a Works to remediate and retain the substation including additional structural support for retained roof
 - b Lighting improvement works
 - c Drainage works
 - d Disconnection/termination of services

14 No allowance has been made for:

- a Diverting or isolating services
- b Removal of any asbestos other than that identified in the asbestos survey
- c Removal of any hidden tanks, interceptors, silos etc. exposed following removal of ground bearing slabs
- d Treatment or removal of contaminated ground exposed during breakout and removal of groundbearing slabs and foundations
- e CCTV works
- f Loss of parking revenue during street closures (Tavistock Street)

15 The following are the perceived to be the major risks and sensitivities associated with the costs:

- a Requirements of the substation operator when working above
- b Identification of hidden asbestos