



ACCUMULATED WORKS MAINTENANCE LIABILITY
THE ROYAL PARKS ESTATE
31 MARCH 2015

An assessment of the Accumulated Works Maintenance Liability as at 31 March 2015.

The term Accumulated Works Maintenance Liability encapsulates the aggregation of identifiable expenditure required to maintain the hard fabric of The Royal Parks estate across a prospective ten year period.

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EXECUTIVE SUMMARY

This report provides an assessment of Accumulated Works Maintenance Liability as at 31 March 2015 and is accompanied by an updated prioritisation list to assist in the forward allocation of maintenance funding. It has been prepared following progressive analysis of data and recommendations arising from the undertaking of periodic, condition, quadrennial and specialist surveys completed in late 2014.

The AWML as at 31 March 2015 is assessed at £56 million. ¹

The term Accumulated Works Maintenance Liability [AWML] encapsulates the aggregation of identifiable expenditure required to maintain the hard fabric of The Royal Parks estate across a prospective ten year period.

The AWML, and contributory processes leading to its determination, assist with works maintenance management by identifying required repair activities, indicative expenditure and comparative prioritisation for all hard fabric assets across The Royal Parks estate.

The AWML is based on the British Standard definition of building maintenance and is made up of collective liabilities comprising annual costs associated with Routine Maintenance, Specialist Surveys and Reports, together with those attributable over a ten year period including the Forward Maintenance Register, Underground Services, Roads, and Separately Identifiable Works Related Projects.

The AWML is compiled with the intention of ensuring improved value for money, effective overall cost control, a reduction in the total accumulation over time, inhibited degradation or possibility of failure of assets, park-wide consistency and collective endorsement.

The complexity of determining the AWML has evolved significantly in support of the increasingly sophisticated approach to planning forward maintenance activities adopted following centralisation of The Royal Parks works maintenance programme management in 2007.

It should be noted that the respective determinants of the AWML have been reconfigured in this calculation to provide improved intelligibility. Annual costs for Routine Maintenance, Specialist Surveys and Reports have been separated from the AWML and all cyclical maintenance liabilities, including for Roads, projected forward over the ten year period. Separately Identified Works Related Projects have been scrutinised in the context of the Project Portfolio & Project Register. Accordingly direct comparison with previous determinations must be qualified.

It is our intention is to ensure that, as far as possible, maintenance management is carried out to a planned and analytical structure, taking into account organisational and respective asset's needs and vulnerabilities, within a cost plan nexus that considers funding availability, urgency and requirement.

Over the next five years, the period of specifically prioritised forward maintenance planning, it is estimated that a minimum of £2.5 million will be expended annually on reducing the AWML, provided funding remains at current levels.

¹ Note that the respective determinants of the AWML have been reconfigured in this calculation and accordingly direct comparison with previous reports must be qualified.

ACCUMULATED WORKS MAINTENANCE LIABILITY | 31 MARCH 2015

The Accumulated Works Maintenance Liability [AWML] encapsulates the aggregation of identifiable expenditure required to maintain the hard fabric of The Royal Parks estate across a prospective ten year period. The AWML as at 31 March 2015 is calculated as follows:

Table 1 Accumulated Works Maintenance Liability	
<ul style="list-style-type: none"> • Forward Maintenance Register <p>Longer term cyclical maintenance works to identified hard fabric including buildings, isolated and linear assets programmed over a ten year period based on prioritisation of statutory, regulatory, health and safety alongside anticipated fabric deterioration.</p>	17,195,000
<ul style="list-style-type: none"> • Underground Services <p>An allowance for works to underground services including water and electrical services, etc.</p>	3,400,000
<ul style="list-style-type: none"> • Roads <p>An allowance for programmed works to roads over a five year period.</p>	4,157,500
<ul style="list-style-type: none"> • Separately Identified Works Related Projects <p>Maintenance projects required as a result of repeated deferral, or of lower maintenance priority.</p> <p>Separately Identified Works Related Projects identified by park managers or from Quadrennial Surveys are captured and prioritised using the CREW Model and scheduled in the CREW List.</p> <p>Sponsorship of a number of Separately Identified Works Related Projects has been transferred to the Prioritised Project List coordinated by the Project Approval Group. The aggregated value of these projects has been retained in the AWML as they continue to form a maintenance liability until completed.</p>	31,160,000
Total	£55,912,500
Accumulated Works Maintenance Liability 31 March 2015	say £56 million

Table 2 Annual Costs	
<ul style="list-style-type: none"> • Routine Maintenance <p>Planned preventative maintenance that is carried out annually by Vinci Facilities. Undertaken at predetermined intervals or according to prescribed criteria and intended to reduce the probability of failure or degradation of the element or components involved. Included is a sum for management of the core contract and an allowance for payment to Transport for London for maintenance of road traffic signals.</p>	3,369,000
<ul style="list-style-type: none"> • Specialist Surveys & Reports <p>An annual allowance for specialist surveys, investigations and reporting to comply with legislation and appropriately clarify and prioritise necessary interventions.</p>	100,000
Total Annual Costs	£3,469,000

Figures shown have no adjustment for cost price inflation and exclude Value Added Tax.

INTRODUCTION

This report has been prepared following progressive analysis of data and recommendations arising from the undertaking of periodic, condition, quadrennial and specialist surveys completed in late 2014.

It provides an updated assessment of Accumulated Works Maintenance Liability as at 31 March 2015 and is accompanied by an updated prioritisation list to assist in the allocation of maintenance funding.

This is the fourth detailed assessment of Accumulated Works Maintenance Liability [AWML] following previous determinations and reports in 2004, 2006, 2010.

The complexity of determining the AWML has evolved significantly in support of the increasingly sophisticated approach to planning forward maintenance activities adopted following centralisation of The Royal Parks works maintenance programme management in 2007.

The precondition for the aggregation of a number of component elements to determine the AWML reflects the requirement for a works maintenance management system which takes into account the peculiarities of The Royal Parks estate and particularly the special considerations necessary relating to heritage and cultural value assets subject to wide and varied use and events.

Maintenance management 'theory' and practice emphasises the importance of planned preventative approaches to maintenance; reducing reliance on reactive maintenance interventions. For non-heritage assets, such planned approaches frequently include preventative repair and replacement of elements in order to avoid failure of an item and all the consequential functional, legal and management implications which arise from such failures.

Preventative repair and replacement is philosophically unacceptable for heritage and cultural assets, where protection of existing fabric and minimal intervention are essential principles. But the planning and prioritisation of activities as a planned preventative approach to maintenance is both possible and desirable.

In addition to planned preventative maintenance, short and long term cyclical maintenance activities identified in the Forward Maintenance Register, and programmed works identified in condition, quadrennial and specialist surveys, Separately Identified Works Related Projects ensure improved value for money, effective overall cost control, a reduction in the total accumulation total over time, inhibited degradation or possibility of failure of assets, park-wide consistency and collective endorsement.

In brief, the characteristics of The Royal Parks' works maintenance management system are as follows:

- Regular and appropriate maintenance is carried out informed by an understanding of the use, cultural value and heritage significance of the asset
- Systems are utilised which take account of the peculiarities of The Royal Parks estate
- Periodic condition, quadrennial and specialist surveys and reports are carried out to provide information about the condition of each asset and to inform decisions about maintenance, conservation and repair
- The recommendations from survey reports are used to inform forward work programmes and activities either for individual assets, or for groups of assets, i.e. paths, railings, etc.
- These programmes are scrutinised and prioritised through regular consultation with Park Managers, Royal Parks' colleagues and consultants, the Facilities Maintenance contractor and key stakeholders.

One key distinction to recognise is the difference between an identified requirement for work forming part of the maintenance liability, and captured in one of the categories forming the AWML, with an identified desire for works more appropriate for consideration through The Royal Parks Project Portfolio & Project Register (coordinated by the Project Approval Group and recorded on the Project Priority List).

The Project Portfolio & Project Register specifically excludes projects comprising preventative and cyclical maintenance if repairing or replacing like with like. These exclusions are captured on the CREW List (see page 13). By way of example: the replacement of existing floodlighting which is inoperable, damaged or inefficient forms part of the AWML, whereas the introduction of new floodlighting to enhance an area should be considered by the Project Portfolio & Project Register.

In summary, the intention is to ensure that, as far as possible, maintenance management is carried out to a planned and analytical structure, taking into account organisational and respective asset's needs and vulnerabilities, within a cost plan nexus that considers funding availability, urgency and requirement.

This report has been prepared with reference to the DCMS *Protocol for the Care of the Government Historic Estate*, best practice guidance prepared by the Government Historic Estates *Managing Heritage Assets* and other practice standards and guidelines prepared by English Heritage and the RICS.

ACCUMULATED WORKS MAINTENANCE LIABILITY

The term Accumulated Works Maintenance Liability [AWML] encapsulates the aggregation of identifiable expenditure required to maintain the hard fabric of The Royal Parks estate across a prospective ten year period.

For the purposes of this assessment the British Standard definition of building maintenance is used. BS3811: 1993 defines maintenance as ‘the combination of all technical and administrative actions, including supervision actions, intended to retain an item in, or restore it to, a state in which it can perform a required function’.²

This definition implies that there are two processes to be considered: *retaining* an item, i.e. work carried out in anticipation of any component failure, and *restoring* an item, i.e. works carried out after a component failure.

Work carried out in anticipation of any component failure is usually referred to as routine or planned preventative maintenance and is captured in the AWML as Routine Maintenance undertaken through the facilities maintenance contract, works including cyclical maintenance identified in the Forward Maintenance Register, works to roads and to a number of underground mechanical and electrical services.

Work carried out after a component failure is usually described as reactive maintenance and is not considered to form part of the AWML; in no small part as it should be unforeseen.

However, the AWML does embrace backlog maintenance where a failure or damage has occurred as a result of long-term degradation and sufficient to warrant project status. Backlog maintenance is maintenance that has been repeatedly deferred on a planned or unplanned basis usually due to a lack of funding but sometimes as a result of operational or organisational requirement.

Separately Identified Works Related Projects generally embrace maintenance works required as a result of repeated deferral, or of lower priority, together with works required as a result of organisational need, revised legislation, regulation or health and safety guidance, to upgrade existing assets to improved standards. They include project work identified for prioritisation by park managers, together with priority works identified in Quadrennial surveys. They are captured for prioritisation on the CREW List (see page 13).

It should be noted that the AWML is a ‘construct’ device to provide a point in time measure of the anticipated works maintenance liability over a ten year period only. Maintenance is required for the full life of every asset, some dating from the seventeenth century, and it is hoped that all heritage and cultural value assets will be maintained for generations to come.

The respective determinants of the AWML have been reconfigured in this calculation to provide improved intelligibility. Annual costs for Routine Maintenance, Specialist Surveys and Reports have been separated from the identified works maintenance liability attributable over a ten year period. To this extent the determination of Roads has been projected forward over the ten year period and Separately Identified Works Related Projects have been scrutinised in the context of the Project Portfolio & Project Register.

Where applicable, changes have been made to respective project determinants to improve consistency and harmonisation across progressive Works and Major Projects assessment methodologies. Accordingly direct comparison with previous AWML determinations must be qualified.

² An extended interpretation of the definition of ‘maintenance’ and its application in determining the AWML can be found in the March 2010 report.

The opportunity exists for some duplication of works maintenance liability, in respect of non-heritage assets, in that an inherent characteristic of planned preventative maintenance is that it is carried out at predetermined intervals, irrespective of the element or component's condition, to reduce the probability of degradation of failure of the item.

Invariably items for works identified through condition or quadrennial survey, or proposed for undertaking as a separately identified works related project, will duplicate some elements already captured within planned preventative maintenance schedules.

It is necessary to retain an element of flexibility in order to be able to respond to unforeseen but opportunistic events that may allow maintenance to be undertaken out of sequence. That is, any works project undertaking provides an opportunity of completing other maintenance activities at the same time. For example works to investigate a potential infestation of dry rot within a building may entail removal of timber panelling and inspection of voids behind timber panelling. At this time maintenance and improvements to service installations may usefully be undertaken.

It is important to note that a number of projects, which include an element of maintenance liability, have been identified for consideration through the Project Portfolio & Project Register coordinated by the Project Approval Group [PAG]. These include particularly playground refurbishments. No deduction has been made from the AWML for these projects as they continue to form a maintenance liability until completed.

Some Separately Identified Works Related Projects, requested specifically by park managers and relating to areas of footpaths, paving and revetments are also identified in the linear assets element of the Forward Maintenance Register. An adjustment has been made to the FMR to reflect these duplications. Similarly a number of Separately Identified Works Related Projects comprise prioritised quadrennial survey works. An adjustment has been made to the Quadrennials total to reflect these duplications.

In summary, adjustments have been made to the respective totals to recognise potential duplications where identified and figures shown have no adjustment for cost price inflation and exclude Value Added Tax.

DETERMINATION OF ACCUMULATED WORKS MAINTENANCE LIABILITY

The AWML was first assessed in October 2004 following a review of all maintenance information and supporting surveys. By their very nature periodic, condition and quadrennial surveys only identify and record the condition of a building or isolated feature at one point in time. Regular updating is essential if they are to retain their value in assessing the AWML.

This report assesses contemporary periodic, condition, quadrennial and specialist surveys to determine the AWML as at 31 March 2015.

Previous assessments have identified and prioritised specific categories of work which are then aggregated to determine the AWML. In order to maintain consistency the same categories have been adopted for this 2015 assessment, however they have been reconfigured in this calculation to provide improved intelligibility.

AWML

- Forward Maintenance Register
- Underground Services
- Roads
- Separately Identified Works Related Projects

Annual costs for Routine Maintenance, Specialist Surveys and Reports have been separated from the works maintenance liability as follows:

Annual Costs

- Routine Maintenance
- Specialist Surveys & Reports

A definition of each categorisation is provided below, together with an acknowledgement of any adjustments made to the summary figures to avoid duplication.

Forward Maintenance Register

The Forward Maintenance Register [FMR] comprises a long term cyclical programme of maintenance works and encompasses matters such as external and internal repairs and decoration, mechanical and electrical maintenance and replacement works. The works are programmed over a ten year period based on prioritisation of statutory and health and safety requirements alongside anticipated building fabric deterioration.

Isolated and linear asset cyclical including footpaths and paving, boundary walls, fencing and railings, revetments, de-silting, bridges, playgrounds, benches, bins and lighting standards have also been surveyed and prioritised over a ten year period.

It should be noted that the tabulated costs listed overleaf for Isolated and Linear Assets do not represent anticipated expenditure in respective years. Instead they represent the level of annual expenditure required to maintain respective assets in 'Good' or 'Fair' condition (see Table 5, page 12). As a consequence of limited funding it is not possible to adopt a comprehensive cyclical maintenance regime for all hard fabric assets across the parks.

To understand the comparative scale of maintenance works required to assets across the estate it should be noted that footpaths and paving comprises a total combined gross area of 741,830 square metres; roughly equivalent in land area to Greenwich Park (75 hectares or 186 acres) or more than sixty Trafalgar Squares. The combined length of walls, fencing and railings across the parks would stretch from central London to Portsmouth; a total distance in excess of 100 kilometres or 62 miles.

In consequence prioritisation focuses on those elements that are categorised as in 'Bad' or 'Poor' condition and requiring work immediately or urgently (within two years). A description of periodic survey categorisation of asset condition and prioritisation can be found in Table 5 on page 12.

FMR activities could be scored on relative weighting model such as 'CREW', however they would invariably score in lower ranges and as such may not be delivered. As such, one of the key tools for ensuring progressive improvement of asset condition has been the ring-fencing of a portion of the budget allocation to focus on key element types.

For example, the ring-fenced sum for footpaths focuses on high footfall, public-facing areas. These are described as 'strategic' or 'primary' walking routes and form the basis of prioritisation focussing on areas that have been identified in 'Bad' or 'Poor' condition and requiring full replacement or resurfacing respectively.

The ring-fencing of budgets ensures that prioritised maintenance activities are undertaken each year and are applied to linear assets including footpaths and paving (£100,000 p.a.), wall repairs (£100,000 p.a.) and decoration of railings, together with other isolated assets including benches and bins (£100,000 p.a.). Over recent years when additional funding of up to £100,000 p.a. has been identified, this has been utilised to undertake additional footpaths and paving repairs in attempt to reduce the AWML.

Table 3 | Forward Maintenance Register: Cyclical Maintenance & Linear Assets

	Cyclical Maintenance	Isolated & Linear Assets	FMR Total
Year 1 2015-16	825,500	1,360,000	2,185,500
Year 2 2016-17	796,000	1,248,500	2,044,500
Year 3 2017-18	681,000	1,268,500	1,949,500
Year 4 2018-19	695,500	1,165,000	1,860,500
Year 5 2019-20	875,500	941,500	1,817,000
Years 6-10 2020-25	3,802,000	5,793,000	9,595,000
Total	£7,675,500	£11,776,500	£19,452,000
Less: CREW Adjustment	1,230,000	1,027,000	2,257,000
Adjusted TOTAL	£6,445,500	£10,749,500	£17,195,000

Total 10 Year Forward Maintenance Register £17,195,000

FMR works are undertaken by Vinci Facilities through the Hard Services Facilities Management contract and comprise identified cyclical maintenance including to isolated and linear assets together with a fixed number of reactive works. Accordingly the FMR costs shown above include an allowance for professional fees and contingencies.

One of our targeted priorities for the coming period is to upgrade store yard complexes across the parks with particular emphasis on the removal of asbestos. For some time our asbestos management has entailed a 'mark and manage' approach, however a number of areas of asbestos sheet roofing and cladding have reached the end of their functional life and are exposed to inadvertent damage or failure.

As a result store yard complex upgrades have transferred to Separately Identified Works Related Projects to ensure prioritised undertaking and an adjustment has been made in the FMR allowances for the identified decoration, asbestos removal and mechanical and electrical upgrade liabilities.

Some Separately Identified Works Related Projects include elements of work listed in the cyclical maintenance, isolated and linear assets sections of the Forward Maintenance Register. An adjustment has been made to the FMR total for cyclical maintenance, isolated and linear asset maintenance costs captured in Separately Identified Works Related Projects.

Underground Services

It is known that many underground services to the parks (including drains, sewers, electrical services, etc.) are antiquated and in poor condition. A significant amount of underground drainage is reaching the end of its design life; however a structured programme to replace it would prove prohibitively expensive in no small part due to the high number of trees to be avoided in replacing this service.

Without extensive invasive surveys it is not possible to accurately determine the full potential liability for maintenance of underground services. It is important to note however that failure of an underground service such as drainage or electrical supply may have an adverse effect on business continuity or event management.

Accordingly we have focussed attention on identified high risk areas which may impinge on business continuity or event management and where possible undertaken service replacements in an attempt to reduce the risk of loss of service and/or associated reactive costs associated with emergency repairs.

The transfer in 2013 of responsibility for foul drainage reticulation to Thames Water has meant that a significant potential liability and risk has been ameliorated.

Retaining consistency with previous assessments, an allowance of £3,404,000, comprising approximately 17.5% of Total FMR, ³ is included within the AWML.

The applied percentage includes an allowance for professional fees and contingency.

Total Underground Services Allowance £3,400,000

³ Cyclical & Isolated/Linear Asset Maintenance prior to CREW Adjustment

Roads

The Royal Parks have 32 kilometres or 19 miles of roads. In addition to monthly health and safety inspections, an annual inspection categorises the condition of our roads and recommends the expenditure to be implemented in a programme of road maintenance.

Table 4 | Projected Roads Expenditure 2015 - 2025

Year 1 2015-16	440,000
Year 2 2016-17	385,000
Year 3 2017-18	412,500
Year 4 2018-19	420,000
Year 5 2019-20	420,000
Years 6-10 2020-25	2,080,000
Total Projected Roads Expenditure 2015-25	<u>£4,157,500</u>

Total Roads Expenditure £4,157,500

This sum includes an allowance for professional fees and contingencies.

Since 2006 we have ring-fenced a portion of the annual budget to specifically address roads maintenance. This ring-fenced sum has been supplemented when additional funding becomes available at the end of the financial year.

Separately Identified Works Related Projects

Routine Maintenance (see page 14) and the Forward Maintenance Register ensure that statutory regulations and legislation, health and safety requirements and policies are met and/or operational efficiency is maintained as far as possible. However, as a result of limited funding it is not possible to adopt a comprehensive routine (planned preventative) maintenance regime for all hard fabric assets across the parks.

Given pressures on funding availability, urgency and convenience a number of desirable maintenance activities are deferred year on year resulting in an accumulation of backlog maintenance.

Backlog maintenance is maintenance that has been repeatedly deferred on a planned or unplanned basis usually due to a lack of funding but sometimes as a result of operational or organisational requirement.

Condition and quadrennial surveys provide detailed information on works necessary to maintain the estate. Condition surveys were completed by Rider Levett Bucknall in December 2014 and Quadrennial surveys of listed structures by Purcell also in 2014.

All periodic, condition and quadrennial surveys undertaken on behalf of The Royal Parks have been harmonized to provide consistent categorisation of asset condition and prioritisation using descriptors as detailed overleaf:

Table 5 | Periodic Survey Categorisation of Asset Condition & Prioritisation

Condition	Description	Priority Rating	Timescale
Good	Structurally sound, weather-tight and with no significant repairs required	P5 Long Term	Subject to longer term cyclical maintenance > 5 years
Fair	Structurally sound but in need of minor or localised repair, or showing signs of a lack of general maintenance	P4 Desirable P3 Necessary	Work necessary within 2 - 4 years to preserve utility
Poor	Deteriorating structure, breached weather-tightness or general deterioration of most elements of the fabric	P2 Essential/Urgent	Work required urgently, < 2 years, to avoid increased deterioration or cost of repair
Bad	Structural failure or clear signs of structural instability, or serious loss of weather-tightness leading to major deterioration	P1 Unavoidable/Immediate	Work required immediately for legal or health & safety reasons, or to prevent imminent damage or deterioration

These surveys have been analysed to determine any possible duplication of tasks captured in the Forward Maintenance Register and remaining prioritised undertakings form the foundation of Separately Identified Works Related Projects. For example, the targeting of upgrade of store yard complexes across the parks, with particular emphasis on the removal of asbestos, have been captured on the 'CREW' List.

As Separately Identified Works Related Projects generally embrace maintenance works required as a result of repeated deferral, or of lower maintenance priority, park managers and consultants are often best placed to advise on recommendations for consideration. Since 2005 project proposals of this nature have been captured for management through the CREW Model which evaluates each project against key criticalities.

The Critical Relative Evaluation Weighting [CREW] Model is a risk assessment based tool for weighting regulatory, corporate and efficiency criticalities in an attempt to prioritise projects independent of historic or personal preferences. Health and safety, statutory and environmental priorities are scored in conjunction with a project's anticipated contribution to meet Corporate Plan objectives and wider operational benefits. The resulting prioritised 'CREW' List serves as an essential tool in allocating funding to identified works maintenance projects.

A number of Separately Identified Works Related Projects comprise prioritised works identified in the Quadrennial surveys. These have been added to the CREW List to ensure effective prioritisation. An adjustment has been made to the Quadrennials total to reflect those undertakings assessed as forming part of the CREW List.

Table 6 | Separately Identified Works Related Projects: CREW List & Quadrennials 2014

Park	CREW List	Quadrennials	Total
Bushy Park & Longford River	1,509,950	585,345	2,095,295
Greenwich Park	1,296,150	203,385	1,499,535
Hyde Park & Grosvenor Sq. Gardens	3,743,975	846,010	4,589,985
Kensington Gardens	1,844,425	755,885	2,600,310
Brompton Cemetery	3,460,500	←	3,460,500
The Regent's Park & Primrose Hill	3,488,425	695,615	4,184,040
Richmond Park	4,460,725	720,150	5,180,875
St James's Park, Green Park & VTG	4,501,305	569,825	5,071,130
Access Control & Carbon Reduction	2,480,500	0	2,480,500
Total	<u>£26,785,955</u>	<u>£4,376,215</u>	<u>£31,162,170</u>

Total Separately Identified Works Related Projects £31,160,000

It should be noted that sponsorship of a number of projects, contributing to form part of the AWML, has been transferred to the Project Portfolio & Project Register forum coordinated by the Project Approval Group [PAG]. These are project proposals where change or enhancement elements are required to an existing asset and elevate the undertaking from a preventative or cyclical maintenance task. These undertakings account for £11,678,500 of the Total Separately Identified Works Projects.

The most significant transfer to the PAG is aspects of the maintenance liability embraced through the Brompton Cemetery Conservation Project. It is anticipated that the majority of maintenance requirements scheduled in Quadrennial surveys will be undertaken alongside works to enhance and develop Brompton Cemetery including maintenance and repair works to North Lodge, South Lodge, Fulham Gate, the Police Box, the Colonnades, Central and Western Catacombs, a number of identified monuments and some areas of pathway and paving. Works to restore the Chapel including to the exterior and interior are also included however replacement of the Chapel roof is not.

For the purposes of determining the AWML we have retained the full cost of works across the Brompton Cemetery site identified in the Quadrennial surveys and totalling £3,135,500⁴. Of this sum approximately £2.25 million of specific maintenance liability is captured within the Brompton Cemetery Conservation Project.

Additionally some Separately Identified Works Related Projects, requested for prioritisation specifically by park managers and relating to areas of footpath or paving, are also identified in the linear assets element of the Forward Maintenance Register. An adjustment has been made to the FMR to reflect these duplications.

⁴ An additional £325,000 is included for Brompton Cemetery in the Separately Identified Works Related Projects for the removal of soil from the Western Catacombs.

ANNUAL COSTS

The respective determinants of the AWML have been reconfigured in this calculation to provide improved intelligibility. Annual costs for Routine Maintenance, Specialist Surveys and Reports have been separated from the identified works maintenance liability attributable over the ten year period.

Routine Maintenance

Routine maintenance, also known as planned preventative maintenance [PPM], is planned maintenance work that is carried out annually. It is undertaken at predetermined intervals or according to prescribed criteria and intended to reduce the probability of failure or degradation of the element or components involved.

Routine maintenance is carried out at specific times, irrespective of the condition of the element or component involved. The frequency of maintenance activity is usually determined by statutory regulations and legislation, health and safety requirements and policies, or operational efficiency.

The contract for the provision of routine maintenance is undertaken by Vinci Facilities through the Hard Services Facilities Management contract and comprises identified planned preventative maintenance together with a fixed number of reactive works. As indicated on page 7 reactive works are not considered to form part of the AWML.

An evaluation of the cost of routine maintenance associated with statutory compliance, health and safety, industry recognised best practice, cost efficiency of bundling tasks and maintaining existing guarantees and indemnities totals £1,815,000 per financial year (excluding production and reactive works). An additional £1,500,000 per annum is added to the sum for the management of the core contract.

It should be noted that, as a result of limited funding, it is not possible to adopt a comprehensive routine (planned preventative) maintenance regime for all hard fabric assets across the parks. Omissions, where possible, are captured through the undertaking of production works.

Production works are undertaken by a specific group of operatives (formerly direct labour) at a fee of £327,000. The works comprise predominantly ad hoc tasks in support of park operational activities, e.g. the removal of elements of hard fabric for a specific event. Where availability permits, the production team are utilised for small refurbishment projects embracing only a small element of cyclical maintenance activity.

An additional sum of £54,000 is payable annually to Transport for London for maintenance of road traffic signals.

Total Annual Routine Maintenance: £3,369,000

Specialist Surveys & Reports

The impact of new legislation or published guidance on the need for additional surveys and possible additional maintenance liability cannot be underestimated. Over recent years this has included work to meet the requirements of the CRC Energy Efficiency Scheme (formerly known as Carbon Reduction Commitment), revised requirements and guidance under the Reservoirs Act 1975 (as amended), together with requirements of the Government Historic Estates Unit and more recently in respect of proposals regarding minimum energy efficiency standards for the domestic (and non-domestic) private rented sector.

The Government has recently published their response to the 2014 consultation and amended proposals as a result. There are two key policy decisions relating to minimum energy efficiency standards and tenancy energy efficiency improvements. The former is of initial concern as it sets a minimum energy efficiency standard at an E Energy Performance Certificate rating (from 1 April 2018 in respect of any new tenancy to a new or existing tenant, and from 1 April 2020 in respect of all privately rented property in scope of the regulations).

Of immediate concern is to establish for which rented properties (there are parallel proposals regarding minimum energy efficiency standards for non-domestic properties) we hold EPCs and respective ratings for each. An exercise may be necessary to obtain EPCs for any outstanding rented properties, to determine measures necessary to ensure a minimum E rating and assess a cost/programme for same.

For the purpose of clarity, listed below are the current surveys undertaken in conjunction with works maintenance management. Many of these maintenance obligations are ongoing and accordingly form part of annual costs associated with works maintenance management.

Table 7 | Specialist Surveys & Reports

Carbon Reduction Commitment Surveys incl. Energy Performance Assessments	12,500
Reservoir Surveys	2,500
Structural Surveys of Bridges	10,000
Road Condition Surveys	10,000
Utility Mapping	15,000
Quadrennial Surveys 2018	25,000
Miscellaneous	25,000
Total Annual Specialist Surveys & Reports	<u>£100,000</u>

Total Annual Specialist Surveys & Reports £100,000

Table 8 | AWML Summary, Annotated: 31 March 2015

The Accumulated Works Maintenance Liability [AWML] encapsulates the aggregation of identifiable expenditure required to maintain the hard fabric of The Royal Parks estate across a prospective ten year period. The AWML as at 31 March 2015 is calculated as follows:

<ul style="list-style-type: none"> • Forward Maintenance Register <p>Longer term cyclical maintenance works to identified hard fabric including buildings, isolated and linear assets programmed over a ten year period based on prioritisation of statutory, regulatory, health and safety alongside anticipated fabric deterioration.</p> <p>An adjustment has been made to the FMR total for cyclical maintenance, isolated and linear asset maintenance costs reflected in Separately Identified Works Related Projects.</p>	17,195,000
<ul style="list-style-type: none"> • Underground Services <p>An allowance for works to underground services including water and electrical services, etc.</p>	3,400,000
<ul style="list-style-type: none"> • Roads <p>An allowance for programmed works to roads over a ten year period.</p>	4,157,500
<ul style="list-style-type: none"> • Separately Identified Works Related Projects <p>Maintenance projects required as a result of repeated deferral, or of lower maintenance priority. Separately Identified Works Related Projects identified by park managers (£15,107,455), or from Quadrennial Surveys, are captured and prioritised using the CREW Model and scheduled in the CREW List. Additional works identified in the Quadrennial Surveys total £4,376,215 after adjustment for Quadrennial Projects captured on the CREW List.</p> <p>Some Separately Identified Works Related Projects include elements of work identified in Quadrennial surveys or elements of work captured in the cyclical maintenance and linear assets sections of the Forward Maintenance Register. An adjustment has been made to the respective totals to recognise potential duplications where identified.</p> <p>Sponsorship of a number of Separately Identified Works Related Projects has been transferred to the Prioritised Project List coordinated by the Project Approval Group. The aggregated value of these projects has been retained in the AWML as they continue to form a maintenance liability until completed (Total £11,678,500).</p>	31,160,000
Total	£55,912,500
Accumulated Works Maintenance Liability 31 March 2015	
	say £56 million

Table 9 | Annual Costs

<ul style="list-style-type: none"> • Routine Maintenance <p>Planned preventative maintenance that is carried out annually by Vinci Facilities. Undertaken at predetermined intervals or according to prescribed criteria and intended to reduce the probability of failure or degradation of the element or components involved. Included is a sum for management of the core contract and a sum payable annually to Transport for London for maintenance of road traffic signals.</p>	3,369,000
<ul style="list-style-type: none"> • Specialist Surveys & Reports <p>An allowance for specialist surveys, investigations and reporting necessary to appropriately clarify and prioritise necessary interventions.</p>	100,000
Total Annual Costs	£3,469,000

Figures shown have no adjustment for cost price inflation and exclude Value Added Tax

AWML STRATEGY 2015|16

The Works budget for 2015|16 is as follows:

Table 10 | Works Budget 2015|16

<ul style="list-style-type: none"> • Routine Maintenance <p>Planned preventative maintenance that is carried out by Vinci Facilities together with a sum for management of the core contract.</p>	3,315,000	
<ul style="list-style-type: none"> • Transport for London <p>An allowance for maintenance of road traffic signals.</p>	54,000	3,369,000
<ul style="list-style-type: none"> • Production & Reactive (Variable) Works <p>An allowance for production (ad hoc) works undertaken in support of park operational activities and anticipated reactive expenditure.</p>	900,000	
<ul style="list-style-type: none"> • Events <p>An allowance for works activities associated with events management.</p>	231,000	1,131,000
<ul style="list-style-type: none"> • Forward Maintenance Register <p>Cyclical Maintenance</p> <p>Long term cyclical programme of maintenance works encompassing matters such as external and internal repairs and decoration, mechanical and electrical maintenance and replacement works.</p>	800,000	
<p>Isolated & Linear Assets</p> <p>Includes footpaths and paving, boundary walls, fencing and railings, revetments, de-silting, bridges, benches, bins and lighting standards.</p>	300,000	1,100,000
<p>Playgrounds</p> <p>An allowance for the refurbishment of one playground.</p>		150,000
<p>Roads</p> <p>An allowance for prioritised roads expenditure.</p>		250,000
<p>Separately Identified Works Related Projects</p> <p>An allowance for allocation to prioritised project undertakings including for specialist surveys, investigations and reporting necessary to appropriately clarify and prioritise necessary interventions.</p>		1,000,000
Total Works Budget 2015 16		£7,000,000

OBJECTIVES

- Objective 1: The CREW Model to be maintained and updated annually.
The five year programme of FMR to be maintained and updated annually.
Condition surveys to be re-completed by 2018.
Outcome: To maintain a planned and analytical approach to works maintenance management, taking into account evolving organisational and respective asset's needs and vulnerabilities.
- Objective 2: Year 2015|16
£1,100,000 to be spent on FMR; £250,000 to be spent on Roads, £1,150,000 to be spent on Separately Identified Works Related Projects.
Outcome: AWML to reduce by £2,500,000.
- Objective 3: Year 2016|17
£1,100,000 to be spent on FMR; £250,000 to be spent on Roads, £1,150,000 to be spent on Separately Identified Works Related Projects.
Outcome: AWML to reduce by £2,500,000.
- Objective 4: Year 2017|18
£1,100,000 to be spent on FMR; £250,000 to be spent on Roads, £1,150,000 to be spent on Separately Identified Works Related Projects.
Outcome: AWML to reduce by £2,500,000.
- Objective 5: Year 2018|19
£1,100,000 to be spent on FMR; £250,000 to be spent on Roads, £1,150,000 to be spent on Separately Identified Works Related Projects.
Outcome: AWML to reduce by £2,500,000.
- Objective 6: Year 2019|20
£1,100,000 to be spent on FMR; £250,000 to be spent on Roads, £1,150,000 to be spent on Separately Identified Works Related Projects.
Outcome: AWML to reduce by £2,500,000.

In March 2020 the AWML should have been reduced, by £12.5 million to £43.5 million, at which point re-evaluation of forward strategy is recommended. See additional comments overleaf.

The objectives are based on the following assumptions:

- Stated expenditure assumes a budget allocation of £7 million per financial year with no allowances for cost price inflation.
- All costs are based on 2015 values.
- There will be no increase in management fees following re-tender of the PPM contract in 2016.
- All projects and budget allocations to be subject to CREW Model prioritisation; other than where subject to 100% external funding.

In determining objectives and outcomes for the forthcoming five year period it is important to note that the Works budget is allocated for the purpose of undertaking maintenance activities only.

As indicated in the Separately Identified Works Related Projects section of this report (page 16) sponsorship of a number of projects, contributing to form part of the AWML, has been transferred to the Project Portfolio and Project Register forum coordinated by the Project Approval Group. These are project proposals where change or enhancement elements are required to an existing asset and elevate the undertaking from a preventative or cyclical maintenance task.

These undertakings account for £11,678,500 of the Total Separately Identified Works Projects.

As such, if projects are completed from the Project Portfolio and Project Register which include an identified maintenance liability, this will result in an additional reduction to the AWML during the year of completion.

By way of example:

For the purposes of determining the AWML we have retained the full cost of works across the Brompton Cemetery site identified in the Quadrennial surveys, together with an additional sum for removal of soil from the Western Catacombs, totalling £3,460,500.

Of this sum approximately £2.25 million of specific maintenance liability is captured within the Brompton Cemetery Conservation Project.

Undertaking of the Brompton Cemetery Conservation Project would result in a reduction to the AWML of £2.25 million.

GLOSSARY

AWML

Accumulated Works Maintenance Liability

The aggregation of identifiable expenditure required to maintain the hard fabric of The Royal Parks estate across a prospective ten year period.

The Augmented AWML incorporates percentage adjustments to appropriate Separately Identified Works Related Projects to provide improved consistency and harmonisation across progressive Works and Major Projects methodology.

Backlog Maintenance

Maintenance that has been repeatedly deferred on a planned or unplanned basis usually due to a lack of funding but sometimes as a result of operational or organisational requirement.

Building Maintenance

The British Standard definition of building maintenance is used. BS3811: 1993 defines maintenance as 'the combination of all technical and administrative actions, including supervision actions, intended to retain an item in, or restore it to, a state in which it can perform a required function.

Condition Survey

An inspection and report on the condition and status of an asset/building; specifically identifying maintenance needs, recording the priority of the need, recording proposed remedies and quantities of items requiring attention before the next survey.

Contingency

A contingency, or contingency sum, is an amount of money (usually expressed as a percentage) included in a project budget to allow for additional costs incurred for unknown or unresolved aspects of the undertaking.

CREW Model

A 'Critical Relative Evaluation Weighting' risk assessment based tool, devised specifically for The Royal Parks, to assist in weighting regulatory, corporate and efficiency criticalities in an attempt to prioritise projects independent of historic or personal preferences. The resulting prioritised list is known as the CREW List.

Cyclical Maintenance

Maintenance requiring repetition at regular intervals.

Cultural (Value) Asset

Inherited assets which people identify and value as a reflection and expression of their evolving knowledge, beliefs and traditions, and of their understanding of the beliefs and traditions of others.

EPC Energy Performance Certificate	An Energy Performance Certificate is required for properties when constructed, sold or let. The Energy Performance Certificate provides details on the energy performance of the property and what can be done to improve its energy performance.
FMR Forward Maintenance Register	Comprises a cyclical programme of significant maintenance works and encompasses matters such as external and internal repairs and decoration, mechanical and electrical maintenance and replacement works. The works are programmed over a ten year period based on prioritisation of statutory and health and safety requirements alongside anticipated building fabric deterioration.
Hard Fabric	<p>A term used particularly by The Royal Parks to denote assets in the care of the Works team and including all buildings, monuments, statues, fountains, roads, bridges and other isolated assets including benches, bins and lighting standards, playgrounds, paths, paved areas and other linear assets including walls, fences, railings and revetments.</p> <p>The Royal Parks vernacular being: ‘everything that doesn’t grow’.</p>
Isolated Asset	In the context of this report includes hard fabric items captured for cyclical maintenance in the Forward Maintenance Register, specifically, bridges, benches, bins, lighting standards and playgrounds.
Liability	An obligation to be undertaken with financial implications.
Linear Asset	In the context of this report includes hard fabric items for cyclical maintenance in the Forward Maintenance Register, specifically, paths/paving, walls, fencing, railings and de-silting and revetments.
Maintenance	See Building Maintenance definition.
PAG	Project Approval Group
Planned Preventative Maintenance PPM	<p>Routine maintenance work that is carried out annually at predetermined intervals or according to prescribed criteria and intended to reduce the probability of failure or degradation of the element or components involved.</p> <p>See Routine Maintenance.</p>

Production Works	Undertaken by a specific group of operatives (formerly direct labour) at a fixed fee. The works comprise predominantly ad hoc tasks in support of park operational activities, e.g. the removal of elements of hard fabric for a specific event. Where availability permits, the production team are utilised for small refurbishment projects embracing only a small element of cyclical maintenance activity.
Priority Project List PPL Project & Portfolio Register	<p>A schedule of project proposals where change or enhancement elements are required to a Royal Parks asset and elevate the undertaking from a predominantly preventative or cyclical maintenance task.</p> <p>Coordinated by the Project Approval Group [PAG] the Priority Project List [PPL] outlines the projects that have been approved by the PAG.</p>
Quadrennial Survey	A four-yearly condition survey inspection and report, undertaken by a conservation architect on listed heritage assets, with recommendations of required maintenance works.
Repair	Necessary activity due to damage or decay; prevents further deterioration and reinstates structural integrity.
Revetment	A facing of timber, steel or concrete for the support and protection of a water course embankment.
Routine Maintenance	<p>Maintenance work carried out at specific times, irrespective of the condition of the element or component involved. The frequency of maintenance activity is usually determined by statutory regulations and legislation, health and safety requirements and policies, or operational efficiency.</p> <p>Also known as PPM Routine Maintenance forms part of Annual Costs associated with works maintenance management.</p> <p>See Planned Preventative Maintenance definition.</p>
Separately Identified Works Related Projects	Generally maintenance works identified through Quadrennial survey and required as a result of repeated deferral or of lower maintenance priority and identified by park managers and consultants for consideration on the CREW List.
Specialist Surveys & Reports	Specialist surveys, investigations and reporting necessary to appropriately clarify and prioritise necessary interventions. Form part of Annual Costs associated with works maintenance management.
Underground Services	Includes drains, sewers, electrical services, etc. generally located underground.

Appendix I | Schedule of Separately Identified Works Related Projects

The following schedules list Separately Identified Works Related projects identified by park managers, or from Quadrennial Surveys, and captured and prioritised on the CREW List. The projects are shown in order of prioritisation on a park by park basis.

At the base of each park schedule projects are shown the sponsorship of which has transferred to the Prioritised Project List coordinated by the Project Approval Group. These are denoted with the acronym 'PPL'.

Where adjustments are shown to Quadrennials 2014, these reflect those undertakings already assessed as forming part of the CREW List.

- All

Replacement of TRP Offices Door Access System	121,000	
Carbon Reduction Conversion of Gas Lamps to Electric	1,452,000	
Carbon Reduction Energy Conservation Activities	907,500	
		£2,480,500
All Total		

- Brompton Cemetery

Brompton Cemetery Restoration Project (Quadrennials 2014)	3,135,000	
PPL Western Catacomb Soil Removal	325,500	
		£3,460,500
Brompton Cemetery Total		

- Bushy Park

Model Boating Pond: 2 No. Bridges to Replace Bridges 2015	48,400	
Remedial Works to Welcome Centre Drainage	12,100	
Hawthorn Lodge: Rationalise Roads & Paths incl. adjacent Cobbler's Walk	48,400	
Bushy Park Storeyard Complex	235,950	
Hampton Court Lodge (Police Station) Porch Roof Replacement	12,100	
Keeper's Lodge (Woodland Gardens), River Lodge & Teddington Gate Lodge: Roofs & Windows	72,600	
Woodland Gardens Irrigation System	205,700	
Improvements to (Sleeve) Outlet from Leg of Mutton Pond	12,100	
Church Grove Passage: Reconstruct in part, Tar, Spray & Chip	48,400	
Pheasantry Deer Grid	24,200	
PPL Paddock Buildings Improvements	20,000	
PPL Bushy Play Area	250,000	
PPL I Upper Lodge Mews	300,000	
PPL Pheasantry Tractor Sheds	200,000	
PPL Paddock Barns/Horse Shelter Refurbishment	20,000	1,509,950
Quadrennials 2014 691,160 less 105,815		585,345
Bushy Park Total		£2,095,295

- Greenwich Park

Flower Garden Resin Bonded Footpaths	96,800	
Greenwich Park Nursery & Grounds Maintenance Improvements	314,600	
Bandstand Quadrennial Works 2014	60,500	
One Tree Hill Steps Removal & Adaptation	36,300	
Cockpit Steps Replacement	30,250	
Saxon Cemetery Path Removal	36,300	
Greenwich Park Offices Improvements	48,400	
PPL Greenwich Boating Lake	175,000	
PPL Greenwich Playground (Full Replacement)	498,000	1,296,150
Quadrennials 2014 219,535 less 16,150		203,385
		<hr/>
Greenwich Park Total		£1,499,535

- Kensington Gardens

Access & Paving Improvements to Peter Pan Statue	30,250	
Diana Memorial Playground Galleon Repairs/Replacement	302,500	
Italian Gardens Drainage & Paving Repairs	42,350	
Queen Anne's Alcove & Store Improvements Quad. Works 2014	60,500	
Albert Memorial Approach Road Drainage Repairs & Resurface	242,000	
Kensington Gardens Storeyard Complex	27,225	
Albert Memorial CCTV Installation Replacement	48,400	
Broad Walk Shelters Improvements Thimbles Quads	24,200	
Kensington Gardens Bandstand	54,450	
South Flower Walk Irrigation System	108,900	
Albert Memorial Lawns Irrigation System	108,900	
Albert Memorial Quadrennial Works 2014 (Biennial)	302,500	
Resurface Broadwalk	242,000	
Diana Memorial Playground Murphy's Law Repairs	12,100	
Diana Playground Café Resurface	18,150	
PPL North Orme Square Gate Lodge	160,000	
PPL Queen's Gate Lodge Damp Works	60,000	1,844,425
Quadrennials 2014 1,111,410 less 355,525		755,885
		<hr/>
Kensington Gardens Total		£2,600,310

• Hyde Park & Grosvenor Square Gardens		
Serpentine Bridge Quadrennial Works 2014	181,500	
Bandstand Resurface	242,000	
Parade Ground/NCD Entry Improvements	242,000	
West Carriage Drive Street Lighting Renewal	363,000	
Bandstand Footpath (South) Strengthening	36,300	
Surface Drainage Improvements	72,600	
Bandstand Restoration	181,500	
WCD Pedestrian Crossings	18,150	
Provision of Grey Water Supply for Events	24,200	
Parade Ground Surface Water Drainage Imps.	60,500	
Victoria Gate Lodge Roof Replacement Quadrennial Works 2014	60,500	
Storeyard Welfare Facilities Upgrade	72,600	
Serpentine Footpath Repairs	90,750	
Hudson Memorial Quadrennial Works 2014	21,175	
Decommission Storeyard Fuel Tanks	48,400	
Hyde Park Gates Highway Signage	24,200	
Repair/Re-bed Serpentine Revetments	24,200	
Decimus Burton Screen Quadrennial Works 2014	121,000	
Grosvenor Square Paving Improvements	24,200	
Prince of Wales Gates Quadrennial Works 2014	42,350	
Ranger's Lodge Fence Replacement	24,200	
Lido/Car Park Lighting	30,250	
Dell Waterfall Pump Repair/Replacement	18,150	
Achilles Monitoring Quadrennial Works 2014	12,100	
Park Passage Footpath Removal	18,150	
PPL Hyde Park Nursery Complex Improvements	750,000	
PPL Victoria Gate Lodge	170,000	
PPL Cumberland Gate Lodge	230,000	
PPL Parade Ground Drainage (Alt)	40,000	
PPL Triangle Car Park	250,000	
PPL Serpentine Car Park	250,000	3,743,975
Quadrennials 2014 (1,240,830 less 424,590) + 29,770		846,010
		<hr/>
Hyde Park & Grosvenor Square Gardens Total		£4,589,985

- The Regent's Park & Primrose Hill

Inner Circle, Chester & York Roads Conversion of Lights to LED	181,500	
Clarence Gate Lodge Refurbishment Quadrennial Works 2014	121,000	
Ready Money Fountain Quadrennial Works 2014	96,800	
Boating Lake Eastern Arm Revetments	96,800	
Hanover Island Cascade Operational	18,150	
Regent's Park Improvements to Water Pressure	24,200	
Primrose Hill Conversion of Lights to LED	121,000	
Lake De-silting & Water Quality Enhancements	605,000	
Gloucester Gate Lodge No. 2 Refurbishment	48,400	
The Hub M&E Refurbishment	60,500	
3 Gloucester Gate Lodge	121,000	
St Mark's Bridge Quadrennial Works 2014	30,250	
St Mark's Bridge Lodge Windows	18,150	
Nursery Lodge Refurbishment	60,500	
Open Air Theatre Improvements	21,175	
Avenue & English Gardens Irrigation	266,200	
Primrose Hill Public & Playground Toilet Refurbishment	157,300	
Bandstand Restoration, Regent's Park	60,500	
PPL Primrose Hill Trim Trail	185,000	
PPL Gloucester Gate Playground	600,000	
PPL Hanover Gate Playground	85,000	
PPL Primrose Hill Play Ground	150,000	
PPL Queen Mary's Garden Yard Complex & Grounds Maintenance Accommodation: Refurbishment & Repair	150,000	
PPL The Regent's Park Nursery Complex Improvements	60,000	
PPL TRP Offices/Storeyard Complex: Repairs & Refurbishment	150,000	3,488,425
Quadrennials 2014 (856,870 + 145,910) less 307,165		695,615
		<hr/>
The Regent's Park & Primrose Hill Total		£4,184,040

- Richmond Park

Richmond Road Safety Audit Improvements	181,500	
Oak Lodge Unstable Wall	15,125	
Road Crossings for Pedestrians	30,250	
Richmond Gate New Lodge Heating Improvements	18,150	
New Timber Gates: Petersham, Bog & Ladderstile	18,150	
Ham Gate Lodge Roof Repairs	24,200	
Ladderstile Gate Lodge Roof	30,250	
Chohole Nursery Lodge Ext Dec, Re-wire, Heating	48,400	
Petersham Playground Shelter Roof	12,100	
Holly Lodge Complex: Repairs & Refurbishment	375,100	
Saw Mill Upgrade	145,200	
Incinerator Requirements	18,150	
Demolition & Removal of RPC Antennae	12,100	
Holly Lodge Carpet & Vinyl Flooring Replacement	36,300	
Replacement/Refurbish Hydrants	36,300	
White Ash Lodge Resurface	36,300	
CCTV Dummy Installations at Car Park Locations	18,150	
PPL White Ash Lodge Refurbishment	650,000	
PPL Robin Hood Gate Lodge Refurbishment	130,000	
PPL Kingston Gate Car Park	400,000	
PPL Broomfield Hill Car Park	850,000	
PPL Sheen Gate Car Park	400,000	
PPL Pembroke Lodge Car Park	800,000	
PPL Culvert Repairs Gallows Pond to Western Boundary	60,000	
PPL Beverly Brook Bridge Pavement Bridges 2015	40,000	
PPL Conduit House Restoration	50,000	
PPL Richmond Gate Realignment	25,000	4,460,725
Quadrennials 2014 1,026,220 less 306,070		720,150
		<hr/>
Richmond Park Total		£5,180,875

- St James's Park, Green Park & Victoria Tower Gardens

Harbour Wall & Cascade Quadrennial Works 2014	302,500	
Children's Playground Timber Replacements	181,500	
The Mall/Marlborough Road Junction Improvements	484,000	
Decommission Subterranean Pillar at Blue Bridge	6,050	
Horse Guards/The Mall Junction Improvements	423,500	
Street Lighting around West Lawn Spur Road	84,700	
New Road Islands in The Mall	60,500	
Duck Island Cottage Quadrennial Works 2014	121,000	
Continue Renewal of Paving & Repairs Around QVM	242,000	
Footpath Repairs due to Subsidence VTG	24,200	
Canada Gate, South/West Africa Gate , Australia Gate & Newfoundland Column Quadrennial Works 2014	121,000	
Devonshire Gates Quadrennial Works 2014	121,000	
HGPG Ottoman Gun & Cadiz Mortar Quadrennial Works 2014	24,200	
Upgrade to QVM Water Treatment	96,800	
Storeys Gate Stabilisation Quadrennial Works 2014	302,500	
Resurface of Horse Guards Parade	60,500	
Re-cable & Renew Tree Uplighters	121,000	
Queen Anne's Gate Quadrennial Works 2014	18,150	
Duck Island Revetments	30,250	
Boy Statue Quadrennial Works 2014	18,150	
Green Park & VTG Railings Redecoration	60,500	
Repaint and Repair Flagpoles at the end of The Mall	181,500	
St James's Storeyard: Repairs & Refurbishment	78,650	
Buckingham Gate Lodge Quadrennial Works 2014	18,150	
CCTV Upgrade, Store yard, Inn the Park (Exterior)	24,200	
Children's Playground Toilet Refurbishment	36,300	
West Lawn Stonework Quadrennial Works 2014	18,150	
Ivy Lodge Improvements	60,500	
Footpaths to either side of the Mall	62,920	
Surface Dressing of South & East Areas, St James's Park	242,000	
Birdcage Walk Resurface	36,300	
Royal Artillery Memorial Structural Integrity Quadrennial Works 2014	15,730	
Marlborough Gate Monitoring Quadrennial Works 2014	15,125	
Leaf Screen	42,350	
Damp Proofing of Buildings	60,500	
Duck Island Yard: Repairs & Refurbishment	37,510	
Remove Shin Rail to Birdcage Walk & Replace with Bow-top	68,970	
Road Section Adjacent Horse Guards Parade Ground	54,450	
Lake Bed Reseal	484,000	
PPL Marlborough Gate Toilet Refurbishment	60,000	4,501,305
Quadrennials 2014 (104,545 + 703,410 + 49,065) less 287,195		569,825
St James's Park, Green Park & Victoria Tower Gardens Total		£5,071,130