

# **London 2012 Olympic Park**

London Organising Committee of the Olympic  
and Paralympic Games (LOCOG)

Consolidated Validation Report (Stage 3) -  
Planning Delivery Zone 2

**July 2013**

**Final**

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#### Notice

This document and its contents have been prepared and are intended solely for the London Organising Committee of the Olympic and Paralympic Games' (LOCOG's) information and use in relation to summarising their remediation and validation works within Planning Delivery Zone 2 of the Olympic Park site.

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# 1. Introduction

## 1.1 Scope

The aim of this Stage 3 Consolidated Validation Report (CVR) is to provide a high level summary of the remediation related activities carried out in Planning Delivery Zone 2 (PDZ2) by the London Organising Committee of the Olympic and Paralympic Games (LOCOG) on the London 2012 Olympic Park in Stratford, London (herein referred to as the "Site"). This Stage 3 CVR summarises LOCOG's remediation-based works up to Olympic Mode following its progressive handover by the Olympic Delivery Authority (ODA). The ODA remediation-based scope has been reported separately within the Enabling Works (Stage 1) and Follow on Project (Stage 2) CVRs<sup>(1&2)</sup>. Together, these three CVRs form the complete summary of remediation works within each Planning Delivery Zone up to Olympic Mode.

This Stage 3 CVR is produced on the basis that LOCOG's Sponsors' remediation-based reports have previously been submitted to the Local Planning Authority (the London Legacy Development Corporation Planning Policy and Decisions Team, (LLDC PPDT), formerly the ODA Olympic Delivery Authority Planning Decisions Team (PDT)) for approval. Therefore, this report does not reproduce or re-evaluate any of the site specific details, results, or assessments that may have been previously reported and are contained herein. Where relevant, additional site information has been included herein, which has not previously been supplied to LLDC PPDT, to support the validation process. This includes site construction records, namely the Permit to Proceed (PtP) *pro forma*, which provide details of excavations into previously remediated ground at the site.

This document has been prepared to discharge LOCOG's obligation under Condition OD.0.36 ('Protection and Validation of Remediation') of the 2007 Olympic, Paralympic and Legacy Transformation Planning Applications: Facilities and Their Legacy Transformation Planning Application<sup>(3)</sup> as well as a number of related Slot-In validation Planning Conditions, as outlined in Section 1.3 below.

## 1.2 Report Objectives

As the focus of the CVRs is to principally discharge OD.0.36, it also serves to capture the other remediation-related Planning Conditions on the Olympic Park set out in Section 1.3. The CVRs have been prepared so as to be issued in stages to provide clarity and ensure progressive regulatory approval is achieved.

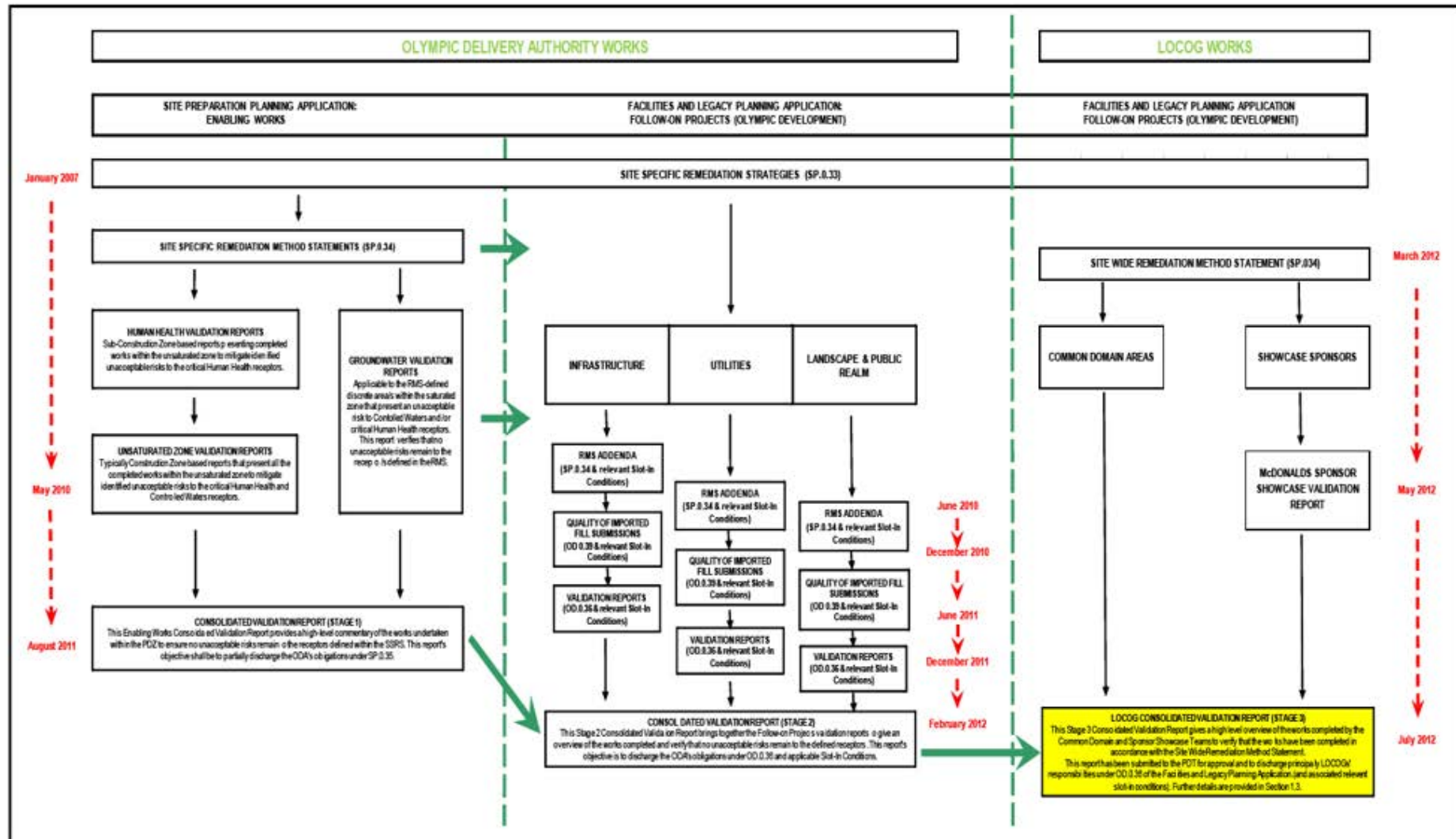
- **Stage 1** – *submitted separately via the Enabling Works CVR<sup>(1)</sup>* – comprises Part I (Background) and Part II (Implementation of Design – Site Preparation (Enabling Works)). Part I sets out the completed remediation works within the context of the preceding remedial design. Part II discusses the implementation and validation works completed by the Enabling Works Team. The objective of this CVR (Stage 1) is to fully discharge the ODA's obligations under Condition SP.0.35 of the Olympic, Paralympic and Legacy Transformation Planning Applications: Site Preparation Planning Application<sup>(4)</sup>.

- **Stage 2** – *submitted separately via the Follow on Project CVR<sup>(2)</sup>* – comprises Part III (Implementation of Design – Olympic Development (Follow-on Projects)). Part III presents the ODA completed construction and remediation works as required to facilitate the development aspects of the works such as infrastructure, venues and landscaping. The objective of this CVR (Stage 2) is to fully discharge the ODA's obligation under Condition OD.0.36 of the Olympic, Paralympic and Legacy Transformation Planning Applications: Facilities and Their Legacy Transformation Planning Application<sup>(3)</sup> and subsequent applicable Slot-In Planning Conditions for Permissions relating to construction variations.
- **Stage 3** – *this document* – discusses remediation-related works completed by LOCOG to facilitate the Olympic Games only and the associated temporary construction of tents, cabins, utilities, sponsor showcases and the installation of hardcover to complete the Human Health Separation Layer (HHS). Validation reports have been prepared for each individual Sponsor Showcase venues and have submitted to and approved by PPDT. The objective of this CVR (Stage 3) is to fully discharge LOCOG's obligation under Condition OD.0.36 of the Olympic, Paralympic and Legacy Transformation Planning Applications: Facilities and Their Legacy Transformation Planning Application<sup>(3)</sup> and subsequent applicable Slot-In Planning Conditions for Permissions relating to construction variations.

This Stage 3 CVR, along with the ODA CVRs reports (Enabling Works (Stage 1) and FoP (Stage 2)) intends to inform the landowner (London Legacy Development Company (LLDC)) of the remediation and validation works completed to the satisfaction of the PPDT. In addition, these reports will track residual actions / issues which will need to be considered as part of any future redevelopment of the site.

The approach taken for reporting the remediation-related documentation, including validation, is presented in Table 1.1 below.

**Table 1.1: Validation Reporting Structure for PDZ2**





## 1.3 Relevant Planning Conditions

The LOCOG site layout for the Park is shown on Drawing 1 and the reporting boundary for this PDZ4 (Stage 3) CVR is presented on Drawing 2.

This document is principally submitted to discharge OD.0.36 from the 2007 Park-wide Olympic, Paralympic and Legacy Transformation Planning Applications: Facilities and Their Legacy Transformation Planning Application<sup>(3)</sup>. In some instances, there are a number of subsequent Slot-In Planning Applications with similar conditions, but with specific variations to cover the construction of certain infrastructure, such as utilities and temporary buildings. In the case of PDZ2, there are no slot-in permissions. The original wording for OD.0036 is reproduced in Table 1.2 below.

**Table 1.2: Principal Planning Condition to be discharged by this Report**

<b><i>Olympic, Paralympic and Legacy Transformation Planning Applications: Facilities and Their Legacy Transformation Planning Application (No. 07/90010/OUMODA):</i></b>		
<i>OD.0.36</i>	<i>Protection and Validation of Remediation</i>	<i>'Validation of the Remediation Works for the purposes of human health protection must be provided within two months of completion of the Final Build Layer within any Construction Zone. When all works for the protection of human health are completed within each Planning Delivery Zone, a Consolidated Validation Report, drawing together the Construction Zone validations, shall be submitted to the Local Planning Authority.'</i>

### 1.3.1 Relevant Planning Conditions

In addition to discharging OD.0.36, there are a number of other remediation-related conditions that have either been discharged progressively or will be by this report. The typical remediation-related conditions generally contain similar wording to that noted below. A site-specific narrative concludes the applicability of each condition.



**Table 1.3 – Summary of Other Applicable Remediation-related Planning Conditions**

Planning Condition	Description	Applicability to PDZ2
<b>OD.0.26:            Foundation Details</b>	<p><i>"Before the construction of each building is commenced, details of the foundations and piling, the means by which previously installed remediation measures are to be safeguarded and any measures to prevent ingress of gaseous contaminants into that building or the contamination of controlled waters, shall be submitted to and approved by the Local Planning Authority".</i></p>	<p>Piles have been installed in the Sponsor Showcase. A Piling Risk Assessment has been approved by the Environment Agency.            See Section 3 for further details.</p>
<b>OD.0.37:            Protection and Validation of Remediation</b>	<p><i>"Approved post-remediation monitoring and maintenance of the remediated land shall continue, as set out in the validation reports, until such dates or events as are approved by the Local Planning Authority.</i>  <i>Reason: To ensure the protection of human health and avoidance of pollution of controlled waters."</i></p>	<p>This condition is not directly applicable to LOCOG works as sampling/monitoring of waters is outside of our scope across the whole Site. However, LOCOG have complied with the PTP process as part of the maintenance of the installed remedial works.            Chemical testing of soils was not considered necessary as virgin-sourced aggregates were used.            See Section 3 for further details.</p>
<b>OD.0.38            Unexpected Contamination</b>	<p><i>"If at any time during the construction of the Olympic Development, contamination is encountered which was not previously identified or treated or has been brought to the surface by construction activity, construction work in that Construction Zone shall not proceed (except to the extent that it would not further disturb that contamination) until a Remediation Change Note, containing an assessment of that contamination and a scheme and timetable to contain, treat or remove it has been submitted to and approved by the Local Planning Authority and any necessary remediation has been carried out.</i>  <i>Reason: To ensure the protection of human health and avoidance of pollution of controlled waters."</i></p>	<p>No instances of unexpected contamination were encountered within LOCOG works in PDZ2.            See Section 3.7 for further details.</p>
<b>OD.0.39            Quality of Imported Fill</b>	<p><i>"No soils or infill materials (including silt dredged from watercourses), shall be imported onto the Site until it has been satisfactorily demonstrated that they present no risk to human health, planting and the environment. Documentary evidence to confirm the origin of all imported soils and infill materials, supported by appropriate chemical analysis test results, shall be submitted to and approved by the Local Planning Authority prior to that import. The import onto the Site of material classified as 'waste' is only acceptable with the prior approval of the Local Planning Authority.</i>  <i>Reason: To ensure that no contaminated material is brought onto Site."</i></p>	<p>LOCOG imported unbound materials on to PDZ2 to complete the Human Health Separation Layer (hardcover) as noted in Section 3. It has been previously agreed with the PPDT, that due to the timeframes involved, this condition will be closed out through approval to this CVR.</p>

## 1.4 Site Location

PDZ2 is an 11.5 hectare triangular parcel of land located in the southern section of the Olympic Park (see Drawings 1 & 2). It lies in an approximately north west to south east orientation and is wholly surrounded by the current Olympic Park Development with PDZ1 to the east and north, PDZs 3 & 4 to the west and PDZ8 to the south. The zone is delineated by City Mill River, which forms the western boundary, the River Lea adjacent to the northern boundary, the Waterworks River forming the eastern boundary and the southern part of the site is bounded by railway lines.

For a summary of the wider site context / background of PDZ2, including the history, geology, hydrogeology, hydrology and site investigations completed, please refer to the Enabling Works (Stage 1) CVR<sup>(1)</sup>.

## 1.5 Olympic and Legacy End Use

The Olympic and Legacy end uses for PDZ2 are set out in the ODA CVRs<sup>(1&2)</sup> and reproduced below:

**Olympic Mode** (see Drawing 3): The majority of PDZ2 will encompass a Concourse Area with soft and hard landscaping along the City Mill River and Waterworks River, whilst a spectator seating area will be present in the south eastern section of the site. The LOCOG works are focused to the south of the PDZ2 relating to the placement of temporary Sponsor Showcase, hardcover, tents and utilities.

**Legacy Mode** (see Drawing 4): The majority of PDZ2 will comprise interspersed areas of soft landscaping and hardstanding with an area to the south east being designated for mixed residential use and the ArcelorMittal Orbit remaining in the western section of the site.

## 1.6 Outstanding / Excluded Works

This Stage 3 CVR only covers LOCOG's works up to Olympic Mode to reflect the works completed to date. It should be noted that LOCOG's scope extends towards the end of 2012 to take into account Reinstatement Works, which effectively refers to the deconstruction of all temporary overlay, particularly Sponsor Showcases.

These Reinstatement Works are not captured herein, but in line with a PPDT agreed approach, records for these works have been collated and are to be provided to LLDC for inclusion in the Stage 4 CVR process. This is discussed further in Section 4.1.



## 1.7 Terminology

Several key terms have been used in this and preceding CVRs, as defined below:

- Reinstatement – this relates to the removal and decommissioning of all the temporary structures and features installed by LOCOG prior to handover to LLDC (please see Section 4.1).
- Human Health Separation Layer (HHSL) – this is the PPDT approved thickness of surface materials placed above the general fill/*in-situ* undisturbed material. The HHSL provides the main barrier to prevent direct contact with the underlying materials in terms of potential risks to human health. This HHSL typically consists of topsoil, subsoil and/or hardstanding and the overall thickness varies based on the defined end use of an area. Unless otherwise agreed with the PPDT the thickness of the HHSL is no less than 600 mm. In addition, the PPDT has subsequently agreed that in areas of hardcover the HHSL thickness can be reduced should there be justification to do so and with explicit PPDT agreement prior to carrying out the works.
- Interim Separation Layer – forms the base layer (100 to 300 mm) of the HHSL. The Enabling Works Formation Level (EWFL) forms its upper surface.
- Final Build Layer (also known as the Final Construction Finishes) – forms the upper 300 to 500 mm of the HHSL. The EWFL is at its base and the Final Finished Level (FFL) forms its upper surface.
- Marker Layer – a brightly coloured (typically orange) geogrid and/or geotextile placed immediately below the HHSL (including hard cover) to mark the base of the separation layer (unless otherwise stated).
- Olympic Delivery Authority – are responsible for delivering the landform and associated infrastructure for the Site. The ODA works were split into two key workstreams:
  - Enabling Works, who were responsible for the demolition, ground contamination assessment and remediation and the delivery of a chemically and geotechnically acceptable platform; and
  - Follow-On Projects (FOPs), who were responsible for the delivery of the venue and infrastructure, such as the Aquatics, Main Stadium, Bridges, Highways and Landscaping.
- Enabling Works Formation Level (EWFL) – is the platform that the Enabling Works typically completed to, which is usually 500mm below the Final Finished Level.
- Final Finished Level (FFL) – this represents the final finished surface which the human health receptors will be exposed, in general this will consist of either soft cover surfaces (landscaping etc.) or hard cover (including buildings). It forms the top of the HHSL.
- General Fill – is the chemically and geotechnically acceptable backfill materials placed by the ODA Teams (Enabling Works and Follow On Projects) below the HHSL and marker layer. The majority of these materials have been placed by the Enabling Works Team and comprises predominantly remediated Made Ground soils demonstrated to be compliant with the prevailing SSRS/RMS requirements.

- 'Clean' import – material, meeting the chemical and geotechnical criteria, imported and stockpiled in designated clean areas of the site. These materials are subject to the Quality of Fill Framework Letter in order to discharge Condition OD.0.39.
- Legacy Transformation Development (LTD) – refers to development relating to the transformation of the facilities for the 2012 Games (Olympic and Paralympic) following the 2012 Games and their subsequent use.
- Legacy Transformation Phase – commences after the end of the 2012 Paralympic Games closing ceremony and ends on 31st December 2014 and is tasked with undertaking the LTD.
- Site Specific Remediation Strategy (SSRS) – the remedial design that sets out the requirements to be protective of both human health and controlled waters. This document sets out the acceptable contamination / chemical concentrations.
- Site Specific Assessment Criteria (SSAC) – the contamination / chemical criteria derived through the Site Specific Remediation Strategy (SSRS), which show the upper bound contaminant concentrations considered to be protective of either controlled waters or human health. As with SSRTs chemical concentrations above the SSAC are likely to necessitate further consideration or action.
- Site Specific Remediation Target (SSRT) – the combined contamination / chemical criteria protective of both controlled waters and human health established by the SSRS. As with the SSAC chemical concentrations above this criteria will typically require further consideration.
- Sub-grade – this is the lowest level of ODA excavations in cut and fill areas. This is always underlain by undisturbed materials and may be coincident with sub-formation in areas of excavation.
- Sub-formation – this is the level at which the marker layer has been installed (or where it would have been installed if it has been agreed with PPDT that it can be omitted).
- Planning Delivery Zones (PDZs) – are used to segregate the Site into Delivery Zones.
- Construction Zone (CZ) – Sub-divisions of the Planning Delivery Zones (PDZs) used for the organisation of construction works in the Enabling Works Contract.
- Site wide Detail Design – Civil Specification (ATK-C-O-XX-XX-ALL-SPE-XX-0002 Rev C00) (or design specification as appropriate) which sets out the minimum geotechnical requirements for the placement of materials. Any materials deposited on Site should confirm to this specification.

## 1.8 Report Limitations

This CVR is based on third party information made available to Atkins from LOCOG, and their Contractors, as well as the ODA from the sources listed as references and the information is assumed to be accurate and complete at the time of preparing this report.

This CVR should be read in light of the legislation, statutory requirements and/or industry good practice applicable at the time of the works being undertaken. Any subsequent changes in this legislation, guidance or design may necessitate the findings to be reassessed in the light of these circumstances.



## 2. Basis of Remedial Design and LOCOG Amendments

### 2.1 Background

LOCOG were responsible for completing the temporary overlay of the London 2012 Olympic Games to facilitate its operation during the Olympic Mode. This included the provision of temporary services, facilities (including Sponsor Showcases) and the installation of the overlay (hardcover) with limited excavations in discrete areas of the Site. Drawings 5 and 6 show all locations in the South Park where LOCOG undertook limited excavations to: install pop-up connections to the existing utilities and services systems and to install below ground duct routes; and the areas within which works were undertaken to install the showcase venues, respectively<sup>1</sup>. Drawing 7 details the areas within PDZ2 where LOCOG were responsible for installing the temporary facilities and sponsor showcase for the purposes of the Olympic Games and undertaking validation.

As part of these works, LOCOG and their Contractors have completed the remediation profile where required and ensured that the remediation works already completed by the ODA was maintained. To this end LOCOG prepared and obtained PPDT approval to the Site Wide Remediation Method Statement<sup>(5)</sup>.

These overlay works were built on the platform constructed by the ODA whose remit comprised site preparation and construction of the permanent structures and infrastructure such as roads, bridges, utilities and landscaping.

The remedial strategy for the Site was set out in a series of increasingly focussed documents which commenced with a Global Remediation Strategy (GRS). The GRS is a high level roadmap that was further developed by the Construction Zone SSRS. The SSRSs were informed by the investigation works completed in accordance with the Intrusive Investigation Method Statement (IIMS) that presents a framework and provides a generic specification for undertaking contamination intrusive investigations across the Site. The design documentation was further refined in a series of SSRS Addenda as new data became available, to ensure the remedial works were reflective of the encountered ground conditions. These documents are discussed in further detail within Appendices in the ODA CVRs<sup>(1&2)</sup>.

Within the SSRS and SSRS Addenda, a Conceptual Site Model (CSM) was developed for PDZ2 presenting potential sources, pathways and receptors. Individual contaminant concentrations protective of either controlled waters or human health, termed Site Specific Assessment Criteria (SSAC), were derived through the SSRS risk assessment process.

The PDZ2 CSM identified several human health critical receptors associated with the Olympic Park and Legacy end uses. In the context of the overall works these human

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<sup>1</sup> Please note that whilst Drawings 5 and 6 show post-games validation locations, they demonstrate the locations where LOCOG completed, disturbed or added to the existing remediation profile across the South Park. Any supporting information regarding the post-games validation of all these locations will be provided to LLDC for inclusion in the Stage 4 CVRs.

health receptors comprised adult athletes, workers, officials and visitors of all ages during the Olympic Mode, and residents, workers / office staff and visitors in the Legacy phase.

The two key controlled waters receptors were considered to be the City Mills River to the west of the site and the Waterworks River to the east (and to a lesser extent the River Lea to the north of the site). In addition perched water, a potential contamination source, was identified across the site above the Alluvium with shallow groundwater present within the River Terrace Deposits (RTD) and deeper groundwater in the Lambeth Group, the Thanet Sands Formation and the Upper Chalk. In the context of the Site and following agreement with the Environment Agency, the groundwater within the RTD and Lambeth Group are not considered to be sensitive receptors on the basis that they have little resource potential and rather constitute potential pathways for contamination migration. The Thanet Sands Minor Aquifer is in continuity with the Upper Chalk Major Aquifer which is considered the more sensitive receptor. The Upper Chalk is provided protection by a substantial thickness of low permeability soil in the upper overlying Lambeth Group, which acts as an aquitard to downward contaminant migration. On this basis, the Upper Chalk Major Aquifer is not considered to be a critical receptor within PDZ2.

Following on from this, the ODA issued a series of Remediation Method Statements (RMSs) that sets out how the remedial design will be implemented and subsequently validated to achieve discharge of the prevailing planning conditions<sup>(4)</sup>.

The Detailed Quantitative Risk Assessment process identified unacceptable risks to both human health and controlled waters receptors across PDZ2 that required excavation, treatment and/or further investigation/delineation. These unacceptable risks were addressed as part of the earthworks and remediation works carried out by the ODA and verified in a series of validation reports<sup>(1&2)</sup>. However, due to a number of factors, it emerged that a limited number of actions that were originally intended to have been completed by the ODA were transferred to LOCOG and/or LLDC to complete. These are set out in Table 3.1 below.

## 2.2 LOCOG Scope of Works

LOCOG was primarily required to complete the remediation, by placing the Final Build Layer of the HHSL, and to ensure the protection of the remediation already carried out by the ODA. In addition, LOCOG was required to demonstrate that their proposed works such as placement of temporary structures did not pose unacceptable risks to Human Health from ground gas and soil vapour. This work included:

- The completion of the Final Build Layer, where required, which will also, in itself, complete the HHSL required as part of the remediation of the site.
- The appropriate reinstatement of any excavations on Site (including replacement of the separation layer and Marker Layer where breached) using chemically and geotechnically compliant materials, such that the integrity of the existing remediation works is maintained.
- Appropriate ground gas mitigation measures as set out in the PPDT-approved Site Wide Remediation Method Statement<sup>(5)</sup> to safeguard the workforce during



Games Mode. The PPDT-approved RMS confirmed that soil vapour mitigation measures were not considered necessary as set out in Section 3.

The Site Wide Remediation Method Statement<sup>(5)</sup> set out LOCOG's proposed works on the London 2012 Olympic Park (see Drawing 1). The LOCOG works were separated into work-streams to suit both delivery and contractual arrangements. The proposed scope of works across these work-streams fell into two broad categories. The first category, which formed the majority of LOCOG works, comprised the placement of hardcover (a bound tarmacadam or similar) over the ODA handover level in order to complete the Final Build Layer (HHSL) to FFL. The second category, which formed a smaller proportion of LOCOG works, comprised some limited and discrete below ground penetrations across the Site, which could be split into single penetrations and larger scale excavations. These below ground activities across the work-streams are set out below:

- The installation of tent pegs to facilitate the erection of the temporary tents during Olympic Mode ranging from 0.3m to 1.2m in length.
- The limited and discrete excavations to connect shallow utilities across the Site (see Drawing 5 for the extent of these utility excavations).
- The (even more) limited and discrete excavations to connect deeper utilities across the Site (see Drawing 5 for the extent of these utility excavations).
- The construction of shallow concrete foundations to support temporary structures, such as those for Sponsor Showcases.
- The installation of fence-posts to facilitate new fencing across the Site.

In terms of PDZ2, the works included the construction of one Sponsor Showcase (McDonalds Restaurant) which principally required the installation of: driven cast *in-situ* piles; installation of shallow utilities; installation of concrete foundations; placement of hardcover; and tent pegs to facilitate construction of the temporary tents.

It should be noted that a number of areas across PDZ2 were not fully remediated by the ODA. These areas were identified in the Retained Areas Risk Assessment Report (RARAR)<sup>(6)</sup> and further updated in the RARAR Addendum<sup>(7)</sup>, which coincided with the completion of the ODA's works. It should be noted that as part of LOCOG's works these areas were not impacted and therefore the RARAR Addendum is still representative of these features.

## 3. Implementation

### 3.1 Summary of Works

The following sections summarise the key construction earthworks completed by LOCOG within PDZ2 taken from either the Validation Report (in the case of the Sponsor Showcase) or Permit to Proceed Applications (PTP's) (in the case of the Common Domain Areas), which are presented in Appendix B. It should be noted that the PTP process is an internal control methodology for works undertaken in previously remediated ground in order to demonstrate that construction works have been carried out appropriately and not impacted the existing remedial provisions. The PTP documentation presented in this Stage 3 CVR has not been provided to or reviewed by PPDT previously.

#### 3.1.1 Sponsor Showcase Areas

The two-storey McDonalds Restaurant was the only Sponsor Showcase in PDZ2. These works principally comprised the installation of 50No. driven piles filled with a concrete-based grout driven into the underlying Lambeth Group and the installation of shallow utilities in the above marker layer materials. These works were subject to the PTP process and the preparation of a Piling Risk Assessment (see Appendix B1). A separate Validation Report has also been prepared which has been approved by the PPDT and submitted under Planning Application 12/00056/AOD (see Appendix B1). The Environment Agency approved the Piling Risk Assessment, with the driven pile methodology generating no spoil. In addition the shallow above marker layer utilities reused the human health separation layer (understood, based on the Landscape and Public Realm (LPR) validation report for PDZ2, to be pre-validated human-health separation layer material placed by the ODA<sup>(6)</sup>). As such, the Sponsor did not need to import any unbound fill, and no chemical testing was considered necessary as the arisings from the utilities excavations were placed adjacent to the trench for progressive backfilling. These works were carried out in accordance with the PPDT approved LOCOG Site Wide Remediation Method Statement<sup>(5)</sup>. It is understood the FFL was completed with LOCOG placing 100mm of tarmac around the Sponsor Showcase in accordance with Drawing 9 (ATK-C-O-XX-XX-ALL-GE-XX-8055 - Pavement Details). The piling risk assessment prepared for McDonalds (Appendix B1) also reviewed the available ground gas data in relation to the proposed redevelopment and identified the risk to the Showcase as being low and characterised as 'Characteristic Situation 1', which is indicative of a typical Made Ground. Therefore, on the basis of the Showcase being considered a commercial development no special precautions were considered necessary by the authors of the Piling Risk Assessment. The authors also noted that the risk is further reduced given the temporary nature of the structure and the integration of a sub-floor void that will allow the building to passively vent. This Showcase, like all Showcases, will be decommissioned and the foundations removed following the Olympic Mode. This is further discussed in Section 4.1.



## 3.1.2 Common Domain Areas

### 3.1.2.1 BP Walk in the Park Sculpture

These works comprised the excavation and installation of a concrete foundation 1.5 metres below Final Finished Level (mbFFL) for the BP Walk in the Park Sculpture located adjacent to the F10 bridge. These works were completed by KBW Ltd. working for the Sponsor under the management of ISG (who are responsible for delivering the Common Domain Areas). These excavation works penetrated the marker layer and the resultant void was backfilled with concrete and the base of the excavation was lined with a marker layer. The arisings generated totaled 26m<sup>3</sup> of above marker layer materials and 22m<sup>3</sup> of below marker layer materials, which were appropriately stockpiled on a geotextile adjacent to the excavation prior to its removal off-site to an appropriately licensed recycling facility as shown on the photographs presented in Appendix B2-1. These works were completed in general accordance with the ISG-specific Method Statement which was appended to their PTP application (0063\_ISGL\_PRW\_0012) presented in Appendix B2-1. This ISG-specific Method Statement preceded the PPDT-approved LOCOG Site Wide Remediation Method Statement<sup>(5)</sup> and was prepared to ensure a strategy was in place to proactively manage the proposed works. Whilst the Method Statement has not been previously issued to the PPDT, it does follow the same principals and philosophy as the PPDT-approved Site Wide Remediation Method Statement<sup>(5)</sup> in terms of segregation and reuse of materials. This is demonstrated through the approach to the works completed and the close-out of the PTP.

### 3.1.2.2 Zone 2 Utility Connections

These utility works were completed in the southern section of PDZ2 by McNicholas as a sub-contractor to ISG. These works covered 63 linear metres up to a maximum depth of 800mmmbFFL, which is approximately 200mm below the marker layer. ISG completed their works in accordance with their ISG-specific Method Statement which was appended to their PTP application (0063\_ISGL\_PRW\_0011) presented in Appendix B2-2. This ISG-specific Method Statement preceded the PPDT-approved LOCOG Site Wide Remediation Method Statement<sup>(5)</sup> and was prepared to ensure a strategy was in place to proactively manage the proposed works. Whilst the Method Statement has not been previously issued to the PPDT, it does follow the same principles and philosophy as the PPDT approved Site Wide Remediation Method Statement<sup>(5)</sup> in terms of segregation and reuse of materials. This is demonstrated by the above marker layer materials (understood, based on the Landscape and Public Realm (LPR) validation report for PDZ2, to be pre-validated human-health separation layer material placed by the ODA<sup>(8)</sup>) being reused both above and the below marker layer, with the below marker layer materials being removed from site to an appropriately licensed facility for recycling. This is demonstrated through the approach to the works completed and the close-out of the PTP. No waste management issues were raised as a consequence of these works due to the reuse of virgin-sourced materials placed by the ODA. In addition, no chemical testing was considered necessary as the works did not breach the subgrade and the reuse of imported material would not require chemical validation testing to be undertaken.

### 3.1.2.3 Temporary Structures

It was recognized that there was the potential for the upward (possibly also including lateral) migration of ground gas and volatile hydrocarbons vapours from the underlying soil and/or waters. As part of the remediation-related conditions, LOCOG and their Contractors have worked to ensure that such works did not pose an unacceptable risk to the Human Health as a result of siting temporary structures above ground or the retention of existing temporary structures through the Olympic-Mode.

There were principally two types of temporary structures present across the Site during the Olympic-Mode: the first were temporary tents; and the second were the continued use of temporary site offices that were constructed by ODA and then transferred to LOCOG for their use.

#### 3.1.2.3.1 Temporary Tents

To facilitate the Olympic Games, a series of temporary tents of various sizes were constructed across the Site to provide 'Front of House' and 'Back of House' facilities. In the majority of cases, these temporary tents were fitted using tent pegs ranging from 600mm to 1200mm in length, equating to ground penetration of between 550mm to 1150mm (see PTP Reference: 0066\_LOC\_PRW\_0001 presented in Appendix B2-3). The use of tent pegs as a fixing method was agreed in the Site Wide Remediation Method Statement<sup>(5)</sup>. In addition to the use of intrusive tent pegs, non-intrusive counter-weights were also used as a fixing method. It should be noted that the PTP in this instance, can only be closed upon completion of the works, which will be upon removal of the tent pegs. When all of the tent pegs have been removed, the PTP will be closed and formally issued to the PPDT. As these are considered reinstatement works, these will be closed out via LLDC as agreed with the PPDT.

The risks posed to Human Health in temporary structures have previously been assessed as set out in the LOCOG Site Wide Remediation Method Statement<sup>(5)</sup>. This assessment concluded that the tents with subfloor voids would be open on at least one side and therefore ventilated to some degree. Tents with no subfloor void were considered as fully enclosed and in these instances, it was specified that these did not need to be adequately ventilated at all times on the basis that a tent with 100m<sup>2</sup> footprint area needed at least a pair of openings, each with an opening area of 6000mm<sup>2</sup>, on opposite sides of the tent (or equivalent ventilation). This was sufficiently addressed by maintaining openings which are equivalent in area to standard airbricks (70 mm x 215 mm), with the tent openings being installed above ground level on opposite sides of the tent. This was considered sufficient for (the largest) 10 m x 10 m tent, and also applicable to the smaller sized tent structures. The Ground Gas Risk Assessment within the Site Wide Remediation Method Statement<sup>(5)</sup> concluded that the above measures would suitably mitigate such ground gas risks to acceptably low levels. However, it was noted that should any service penetrations be present through the floor, they would need to be appropriately sealed. Atkins has not been advised whether services did penetrate the floor, but it was considered unlikely given the prescriptive and rigid generic layout and construction of the tents.

The above mentioned mitigation measures were also considered as suitably appropriate to further safeguard against the low potential for the upward migration of vapours through the unsaturated zone.

#### 3.1.2.3.2 Site Cabins



The continued use of temporary site cabins constructed by the ODA and then subsequently transferred to LOCOG, such as the Aquatics and Park Operations retained Site Offices have been assessed for risks to Human Health from ground gas and soil vapour. In addition new site offices were created by LOCOG specifically for the Olympic-Mode and both of the aforementioned cases have been previously assessed in the LOCOG Site Wide Remediation Method Statement<sup>(5)</sup> based on the prescribed office design. It should be noted that all the permanent structures have been constructed by the ODA and are therefore outside the scope of LOCOG works. The LOCOG site offices all comprise Elliot cabins approximately 6m long, 3m wide and 2.5m high with the ODA cabins being comparable in size. These cabins have been bolted together to form large modular buildings which are up to three storeys high, but typically are no greater than two storeys. The cabin floors are designed to be protected by a continuous steel sheet, with approximately 100mm of void space beneath the cabin floor allowing natural ventilation. In addition, these cabins were supported on plinths (approximately 0.7m high) at all four corners

#### 3.1.2.4 Installation of Hardcover

Another integral component of ISG Common Domain works, carried out by SpadeOak, was the installation of tarmacadam within 'Front of House' and 'Back of House' areas in the southern part of PDZ2. The installation of 100mm of tarmacadam, which was undertaken by LOCOG for Olympic Mode only and thus temporary, has been carried out in accordance with the Site standard Pavement Detail (Drawing 9) in the area shown on the enclosed Pavement Area Key Plan (Drawing 8), which is understood to 'complete' the Human Health Separation Layer to FFL.

## 3.2 Residual Actions transferred from ODA Scope

Table 3.1 below presents the residual actions identified at the end of the ODA stage of the project, as summarised within the PDZ2 Follow-on Projects (Stage 2) CVR<sup>(2)</sup>. The table below summarises the works undertaken by LOCOG to address these actions.

**Table 3.1 – Residual Remedial Actions from the completion of the ODA Works (Table is taken from the PDZ2 Stage 2 CVR<sup>(2)</sup>)**

No. (from Table 4.1 of the Stage 2 CVR)	Title	Required Action	Action By	Action Completed by LOCOG
2.1	Completion of groundwater monitoring for the Southern Plume	Future land owners should note that the Southern Plume groundwater monitoring across the southern part of the Olympic Park shall continue for a period of approximately 12 months as soon as reasonably practicable post Games. The groundwater monitoring results and any associated additional remedial actions required by the Regulator/PDT approval to fully discharge Condition 35 of 07/90011/FUMODA (Olympic, Paralympic and Legacy Transformation Planning Applications: Site Preparation Planning Application) will be defined and actioned accordingly.	Future land owners / developers – London Legacy Development Corporation (LLDC)	Not Applicable.
2.2	Soil vapour	Future land owners and developers shall be cognisant of the potential below ground contamination in the vicinity of NBHCZ2a-810 (see PDZ 2 Stage 1 Consolidated Validation Report, REP-ATK-PM-ZZZ-ZZZ-ZZZ-E-0193) as part of the design and construction process <sup>(1)</sup> . It is recommended that a precautionary approach is taken to future works in this section and any re-development within 20m of borehole location NBHCZ2a-810 should consider the need for additional monitoring and assessment. This would be necessary to evaluate potential risks from vapour inhalation pathways and potential creation of preferential migration pathways to controlled waters from, for example, piling activities and the resultant mitigation measures for the development.	Future land owners and developers / LLDC	Not applicable as LOCOG did not undertake any below ground works in this area.
2.3	Invasive Species Monitoring and Treatment	Ongoing monitoring of invasive species adjacent to the river bank (refer to the Olympic Park Invasive Species plan in Appendix E which highlights these areas).	Future land owners and developers / LLDC	Not applicable as LOCOG did not undertake any below ground works in this area.



No. (from Table 4.1 of the Stage 2 CVR)	Title	Required Action	Action By	Action Completed by LOCOG
2.4	Excavation of soils at the Site	<p>Future land owners and developers shall take appropriate health and safety measures to protect workers involved in excavation of soils.</p> <p>It is likely that a permitting system similar to PTP shall be implemented within the Olympic Park in post-Games mode.</p> <p>Future land owners / developers should be cognisant of utilities works below Enabling Works sub-grade completed by McNicholas Utilities. In certain areas the project re-used non validated materials around their utilities. As such below marker layer soils around utilities should be treated as potentially contaminated / harmful to health. Health and safety risks to future workers accessing these utilities should be assessed in advance of undertaking works. For details of these works, please refer to the ODA Stage 2 CVR<sup>(2)</sup>. Note that these works are separate to those undertaken in Section 3.1.2.2 above.</p>	Future land owners and developers / LLDC	Works have been undertaken in accordance with the PTP in the discrete and limited areas that LOCOG have carried out below ground works.
2.5	Placement of marker layer and HHSL	<p>Maintain HHSL and installation of marker layer during future works and install where omitted by Enabling / FoPs including the eastern bowl of Bridge F06, Bridges F08, F10B and underpass U06 (locations are shown on Figure 4).</p> <p>Transformation works associated with removal of bridge structures must also include for the reinstatement of a suitable thickness of HHSL and placement of the marker layer.</p>	Those undertaking transformation works and future land owners and developers / LLDC	Not Applicable.
2.6	Suitable infrastructure design	Future land owners and developers need to consider ground conditions when designing appropriate infrastructure, such as foundations, utilities, etc. Infrastructure installed beneath the marker layer should assume ground conditions are impacted by chemical contamination and appropriate mitigation measures should be taken (e.g. use of barrier pipes for potable water, sulphate resistant concrete etc).	Future land owners and developers / LLDC	All temporary facilities have been suitably designed by LOCOG.

No. (from Table 4.1 of the Stage 2 CVR)	Title	Required Action	Action By	Action Completed by LOCOG
2.7	Suitable methods to protect contamination pathways	In agreement with PPDT the remedial designers have completed a Park-wide assessment of risks to controlled waters from removal of Alluvium <sup>(9)</sup> . Future land owners and developers need to consider protection of contamination pathways as part of their earthworks design.	Remedial Designers / future land owners and developers / LLDC	LOCOG have only penetrated the Alluvium for the installation of piles in the Sponsor Showcase. The PPDT-approved Piling Risk Assessment demonstrated LOCOG's cognisance of protecting potential pollutant pathways as set out in Section 3.1.1. Further details are also presented in Section 3.4.
2.8	Ground gas / vapour assessment	Future land owners and developers need to review requirements for ground gas assessment and potential protection measures as part of the design process.	Future land owners and developers / LLDC	The risk of ground gases to the temporary facilities has been suitably mitigated as discussed in Section 3.1.
2.9	Decommissioning / protection of monitoring installations and facilities	Future land owners and developers will be responsible for the protection of any retained monitoring installations and facilities required for ongoing monitoring.	Future land owners and developers / LLDC	The boreholes identified by ODA were safeguarded during LOCOG's works and have been transferred to LLDC for future monitoring. A letter detailing these boreholes was issued to LLDC from ODA dated 28 <sup>th</sup> September 2012 (ref. LET-ATK-PM-ZZZ-ZZZ-ZZZ-E-3581) and confirms the boreholes remaining in PD22 for future post-Games monitoring (refer to details in Appendix B4).
2.10	Completion of unremediated areas & Restrictions to remediation	An addendum to the Retained Areas Risk Assessment Report (RARAR) has been produced <sup>2</sup> by the remedial designers for details of any areas not remediated as part of the ODA works <sup>(2)</sup> . Future developers need to consider what additional information is required in these areas. These include certain of the ODA 'white areas' and loop road verges where the full remedial scope has not been implemented.	Remedial Designers / future land owners and developers / LLDC	Not applicable. No works have been completed by LOCOG in 'retained areas'.

No. (from Table 4.1 of the Stage 2 CVR)	Title	Required Action	Action By	Action Completed by LOCOG
2.11	Removal of Olympic Park Fence Line (OPF)	An easement associated with the OPF has meant that remediation and placement of Marker Layer and full HHSL has not been completed by ODA. The area of the OPF shall be assessed and corrective actions undertaken to complete the remedial design as part of the Legacy / Transformation phase.	Future land owners and developers / LLDC	Not applicable. No works have been completed by LOCOG in the area of the OPF.
2.12	Risk assessments	Future land owners and developers shall complete appropriate risk assessments with respect to UXO, pathogens, asbestos, radiation and ground gas / vapours when undertaking excavations and / or construction activities during their work.	Future land owners and developers / LLDC	Not applicable as all of LOCOG works remained within the ODA Fill materials, other than piling which is discussed in Sections 3.1 and 3.4 respectively. Ground gas and soil vapour are also discussed in Section 3.1.
2.13	Future land use	Future land owners and developers shall ensure that areas designated for different land uses are not amended without reassessment of the soil conditions and that the Site is not used for growing edible crops or for private gardens. This includes the ODA 'white areas' where the full remedial scope has not been implemented.	Future land owners and developers / LLDC	LOCOG have, where required, completed the final finishes to form the temporary hardcover during Games Mode as set out in the Design.
2.14	Changes in final level	Any works by future land owners and developers involving a reduction of FFL will require a reassessment of the underlying soil and potentially additional investigation or remediation. The design levels used for the ODA remediation assume that a minimum 600mm thickness HHSL will be provided.	Future land owners and developers / LLDC	Not applicable. No works have been completed in 'retained areas' and LOCOG have not altered or increased the sensitivity of any Olympic end use.
2.15	Validation reporting	<p>Future works will need to be captured and recorded through the established validation process including further stages of Consolidated Validation Report production on a zonal basis.</p> <p>This includes the already established LOCOG Stage 3 CVRs, infrastructure 'bump-out', where necessary, and subsequent Transformation and Legacy stages of the project.</p>	LOCOG, LLDC and future land owners and developers	LOCOG works within PDZ2 have been captured within this Stage 3 CVR.



### 3.3 Safeguarding Remediation / Reinstatement of Protection Measures Post Games

LOCOG were required to comply with the 'Permit to Proceed' (PTP) system put in place by ODA, which aimed to ensure the completed remediation works were protected from subsequent works (Appendix C).

Prior to the commencement of ground excavation works that predominately penetrated the marker layer, the information required by the PTP team was provided on an ATK-084 'Protection of Remediation Works' proforma completed by LOCOG and submitted to the PTP team for approval. The PTP team informed LOCOG of the pertinent remedial aspects they should be aware of during their works. On completion of the ground excavation works LOCOG demonstrated to the PTP team (through the completion of Section C) adequate protection of existing remediation works.

This process was supported by periodic PTP Audits of the projects by the PTP team, which monitored materials management and protection of remediation works. If non-compliances were identified during these audits, the LOCOG project management team were notified and steps put in place to address the issues. The opened PTPs are presented in Appendix B.

### 3.4 Mitigation Measures for Contamination Migration

Whilst a number of below ground works were undertaken in this PDZ as set out in Sections 2.2 and 3.1, the majority were predominantly limited to the above marker layer materials. The only instance where the underlying relatively impermeable Alluvium was penetrated to potentially create a preferential migration pathway to the underlying River Terrace Deposits was in the case of the driven piles for the Sponsors Showcase (McDonalds). This risk was suitably mitigated by the preparation, and subsequent EA-approval, to the Piling Risk Assessment (see Appendix B1).

In addition, there are a number of existing boreholes in PDZ2 that currently require decommissioning post-Games during the reinstatement phase of works. This is discussed further in Section 4.1 with details of retained groundwater monitoring boreholes provided in Appendix B4.

### 3.5 Restrictions, Retained Areas & Residual List

It is understood that there were restrictions to the completion of the ODA Team's remediation works as a result of constraints such as third party boundaries and retained vegetation, which are recorded on the ODA as-built drawings. It is currently understood that no LOCOG temporary structures have been placed on these restricted areas.



## 3.6 Sampling and Analytical Testing

Whilst no sampling and validation chemical testing, either in situ or ex situ, was considered necessary in PDZ4 by LOCOG's contractors, the chemical acceptability criterion (SSACs) for each Construction Zone is set out in the PPDT-approved Site Wide Remediation Method Statement<sup>(5)</sup>. Nonetheless, in instances where chemical testing was required, the methodologies proposed would have been undertaken in accordance with recognised UK industry guidance and Park-wide protocols. Analyses of samples would have been undertaken by UKAS accredited laboratories and soils were analysed using MCERTS accredited methods.

## 3.7 Radiological Material / Unexpected Contamination

No instances of unexpected contamination, as set out in Condition OD.0.38 in Section 1.3, were recorded during LOCOG works in this zone.

## 3.8 Materials Management

The temporary stockpiling of materials were managed by all LOCOG's contractors in accordance with the PPDT approved Site Wide Remediation Method Statement<sup>(5)</sup>. This involved the segregation of above and below marker layer materials, where required, using ground sheeting and appropriate bunding of potentially contaminated material. Temporary stockpiles were sited adjacent to the works and, based on information in the PTPs presented in Appendix B, a total of 38 m<sup>3</sup> of materials excavated from below the marker layer and 35 m<sup>3</sup> of materials excavated from above the marker layer removed from Site by appropriately licensed contractors to appropriately licensed off-site recycling facilities as soon as practicable. Again, based on information in the PTPs presented in Appendix B, 47 m<sup>3</sup> of above marker layer materials excavated as part of works undertaken by LOCOG (understood, based on the Landscape and Public Realm (LPR) validation report for PDZ2, to be pre-validated human-health separation layer material placed by the ODA<sup>(8)</sup>), were reused for backfilling both above and below marker layer excavations.

In the instances where aggregates have been imported on to Site to construct their works, LOCOG has sourced these materials via the ODA approved supplier, Aggregate Industries (AI). The materials would be either virgin-sourced or WRAP-compliant. In the instance of PDZ2, no materials have been imported on to Site.

The PPDT-approved LOCOG Site Wide Remediation Method Statement<sup>(5)</sup> discusses the agreement reached with the Environment Agency for use of a U1 Waste Management Exemption by the ISG Team. This type of exemption would allow the use of suitable "wastes" for small scale construction of up to 1000 tonnes per PDZ. In addition it would also have allowed the reuse of below marker layer materials. However, in practicable terms, it was unmanageable to implement across the Site with individual work packages being typically of short durations delivered to a restrictive programme that could not accommodate the additional costs and delays awaiting the

receipt and assessment of chemical test data. It is for these reasons that following a re-review, virgin-sourced and/or engineered products were reused or used in LOCOG works and below marker layer materials were sent off-site to an appropriately licensed recycling facility.

### 3.9 Health, Safety and Environment

LOCOG works were completed in accordance with Construction (Design and Management) (CDM) Regulations. Permit to work, permit to dig and permit to proceed systems were in operation for the duration of LOCOG works. Staff wore, as a minimum, suitable Personal Protective Equipment (PPE), with gloves, helmets, boots, eye protection and hi-vis clothing. All details regarding Health and Safety, environmental controls and monitoring are provided within the various LOCOG construction risk assessments and method statements.

Baseline environmental monitoring across the Olympic Park was undertaken and reported by the ODA and was therefore outside of LOCOG's scope.



## 4. Conclusions

This PDZ2 LOCOG CVR concludes that the placed soils do not pose an unacceptable risk to the SSRS defined critical controlled waters and human health receptors. On this basis this PDZ2 CVR seeks to discharge LOCOG's obligations under Condition OD.0.36 of the Facilities and Their Legacy Transformation Planning Application and the Slot-In Validation Planning Conditions.

Residual remedial actions for completion during future works and / or restrictions to future development within PDZ2 are summarised in Table 4.1 below. The incoming Project Teams should be cognisant of these residual actions together with the underlying assumptions of the SSRS design.

### 4.1 Reinstatement Works

This report only discusses LOCOG temporary works up to Olympic-Mode. LOCOG's actual scope will be completed towards the end of 2012 upon completion of the Reinstatement Works, which originally comprised deconstruction of all temporary facilities and removal of temporary hardcover. The agreed approach to these Reinstatement Works was issued to LLDC PPDT from Atkins, on behalf of LOCOG, via email correspondence dated 19th October 2012 (refer to Appendix B3).

Within this correspondence it was confirmed that validation documentation, to support these works, would be provided to LLDC for inclusion in the Stage 4 CVRs. In addition, it was agreed with both LOCOG and LLDC that showcase structures would be deconstructed and all Reinstatement Works in these areas would be carried out in the above marker layer materials only.

Reinstatement Works were to comprise the cutting down of piles to marker layer, where piled foundations were used, removal of concrete bases (where necessary) and the removal/capping of temporary shallow utilities.

The existing Human Health Separation Layer (HHSL) was to be reused in these discrete areas as backfill. Given the discrete nature of the works, controlled method of excavation comprising segregation, storage on hardcover and the type of material used in the HHSL (typically virgin sourced materials), no chemical testing was considered necessary.

It may have been necessary to import a small volume of backfill to make these levels back up to the existing ground level. In these instances virgin-sourced materials were to be imported. An Import of Fill application was submitted to cover this import Park-wide, which was approved by the PPDT(8). This submission included source, quantity, deposition and timeframe as set out in the Import of Fill Framework letter.

The Reinstatement Works have been recorded on a Permit to Proceed (or similar) and include the following pertinent details: description of the proposed works, as-built drawings (for cutting off piles), site plans, photographs and confirmation from LOCOG that these works were appropriately carried out in accordance with this email.

These PTPs (or similar) were prepared on an area basis and form one part of the handover pack to LLDC. It will then be for LLDC, as agreed, to seek discharge from PPDT of these and their works.

However, all existing hardcover outside of the showcase structures and utility ducts has been retained and transferred to LLDC.

Any boreholes encountered during the Reinstatement Works were to be appropriately decommissioned, unless they are confirmed by ODA/LLDC as being part of the long term monitoring programme. In such instances, these boreholes are to be appropriately maintained.

The Reinstatement Works were overseen by LOCOG and independently verified by the PTP team (or equivalent) for and on behalf of LLDC. Following completion of these Reinstatement Works, the PTP application was closed and forms the sole record of LOCOG works, which has been passed directly on to LLDC to validate these works to the satisfaction of PPDT.

## 4.2 Further Works – Residual List and Issues Affecting Future Development

Table 4.1 below records the outstanding works that were generated from the ODA and LOCOG pre-Games scope that have subsequently been transferred to LOCOG for completion during the Reinstatement Works or Transformation phases of the site redevelopment. This table updates similar tables presented in the ODA CVRs<sup>(2&3)</sup>.

In addition, Table 4.1 records some key aspects for future developers to consider as part of their works. It is further noted that this table does not in any way alleviate the incumbent Project Teams from complying with the full requirements of the remediation documentation, their legal, regulatory and contractual obligations.

Appendix D of this report provides a tracker of comments raised by Hyder Consulting Limited (Hyder), PPDT's technical consultants, as a result of review of this document together with responses from the applicant. This tracker confirms the comments raised have been closed out.



**Table 4.1: Works for Incoming Projects and Restrictions on Future Works**

No.	Title	Required Action	Action By
3.1	Completion of groundwater monitoring for the Southern Plume	Future land owners should note that the Southern Plume groundwater monitoring across the southern part of the Olympic Park shall continue for a period of approximately 12 months as soon as reasonably practicable post Games. The groundwater monitoring results and any associated additional remedial actions required by the Regulator/PPDT approval to fully discharge Condition 35 of 07/90011/FUMODA (Olympic, Paralympic and Legacy Transformation Planning Applications: Site Preparation Planning Application) will be defined and actioned accordingly.	Future land owners / developers – London Legacy Development Corporation (LLDC)
3.2	Soil vapour	Future land owners and developers shall be cognisant of the potential below ground contamination in the vicinity of NBHCZ2a-810 (see REP-ATK-PM-ZZZ-ZZZ-ZZZ-E-0193) as part of the design and construction process <sup>(1)</sup> . It is recommended that a precautionary approach is taken to future works in this section and any re-development within 20m of borehole location NBHCZ2a-810 should consider the need for additional monitoring and assessment. This would be necessary to evaluate potential risks from vapour inhalation pathways and potential creation of preferential migration pathways to controlled waters from, for example, piling activities and the resultant mitigation measures for the development.	Future land owners and developers / LLDC
3.3	Invasive Species Monitoring and Treatment	Ongoing monitoring of invasive species adjacent to the river bank (refer to the Olympic Park Invasive Species plan in Appendix E which highlights these areas).	Future land owners and developers / LLDC
3.4	Excavation of soils at the Site	<p>Future land owners and developers shall take appropriate health and safety measures to protect workers involved in excavation of soils.</p> <p>It is likely that a permitting system similar to PTP shall be implemented within the Olympic Park in post-Games mode.</p> <p>Future land owners / developers should be cognisant of utilities works below Enabling Works sub-grade completed by McNicholas Utilities. In certain areas the project re-used non validated materials around their utilities. As such below marker layer soils around utilities should be treated as potentially contaminated / harmful to health. Health and safety risks to future workers accessing these utilities should be assessed in advance of undertaking works. For details of these works, please refer to the ODA Stage 2 CVR<sup>(2)</sup>. Note that these works are separate to those undertaken in Section 3.1.2.2 above.</p>	Future land owners and developers / LLDC

No.	Title	Required Action	Action By
3.5	Placement of marker layer and HHSL	Maintain HHSL and installation of marker layer during future works and install where omitted by Enabling / FoPs including the eastern bowl of Bridge F06, Bridges F08, F10B and underpass U06 (locations are shown on Figure 4). Transformation works associated with removal of bridge structures must also include for the reinstatement of a suitable thickness of HHSL and placement of the marker layer.	Those undertaking transformation works and future land owners and developers / LLDC
3.6	Suitable infrastructure design	Future land owners and developers need to consider ground conditions when designing appropriate infrastructure, such as foundations, utilities, etc. Infrastructure installed beneath the marker layer should assume ground conditions are impacted by chemical contamination and appropriate mitigation measures should be taken (e.g. use of barrier pipes for potable water, sulphate resistant concrete etc).	Future land owners and developers / LLDC
3.7	Suitable methods to protect contamination pathways	In agreement with PPDT the remedial designers have completed a Park-wide assessment of risks to controlled waters from removal of Alluvium <sup>(9)</sup> . Future land owners and developers need to consider protection of contamination pathways as part of their earthworks design.	Remedial Designers / future land owners and developers / LLDC
3.8	Ground gas / vapour assessment	Future land owners and developers need to review requirements for ground gas assessment and potential protection measures as part of the design process.	Future land owners and developers / LLDC
3.9	Protection of monitoring installations and facilities	Future land owners and developers will be responsible for the protection of any retained monitoring installations and facilities required for ongoing monitoring.	Future land owners and developers / LLDC
3.10	Completion of unremediated areas & Restrictions to remediation	An addendum to the Retained Areas Risk Assessment Report (RARAR) has been produced <sup>2</sup> by the remedial designers for details of any areas not remediated as part of the ODA works <sup>(2)</sup> . Future developers need to consider what additional information is required in these areas. These include certain of the ODA 'white areas' and loop road verges where the full remedial scope has not been implemented.	Remedial Designers / future land owners and developers / LLDC
3.11	Removal of Olympic Park Fence Line (OPF)	An easement associated with the OPF has meant that remediation and placement of Marker Layer and full HHSL has not been completed by ODA. The area of the OPF shall be assessed and corrective actions undertaken to complete the remedial design as part of the Legacy / Transformation phase.	Future land owners and developers / LLDC
3.12	Risk assessments	Future land owners and developers shall complete appropriate risk assessments with respect to UXO, pathogens, asbestos, radiation and ground gas / vapours when undertaking excavations and / or construction activities during their work.	Future land owners and developers / LLDC



No.	Title	Required Action	Action By
3.13	Future land use	Future land owners and developers shall ensure that areas designated for different land uses are not amended without reassessment of the soil conditions and that the Site is not used for growing edible crops or for private gardens. This includes the ODA 'white areas' where the full remedial scope has not been implemented.	Future land owners and developers / LLDC
3.14	Changes in final level	Any works by future land owners and developers involving a reduction of FFL will require a reassessment of the underlying soil and potentially additional investigation or remediation. The design levels used for the ODA remediation assume that a minimum 600mm thickness HSSL will be provided.	Future land owners and developers / LLDC
2.15	Validation reporting	<p>Future works will need to be captured and recorded through the established validation process including further stages of Consolidated Validation Report production on a zonal basis.</p> <p>This includes the already established LOCOG Stage 3 CVRs, infrastructure 'bump-out', where necessary, and subsequent Transformation and Legacy stages of the project.</p>	LOCOG, LLDC and future land owners and developers
3.17	Reinstatement Works	Complete Reinstatement Works in accordance with Section 3 and 4.1.	LOCOG to carry out and LLDC to validate

## 5. References

1. Atkins Limited (for the Olympic Delivery Authority), PDZ2 Enabling Works (Stage 1) Consolidated Validation Reports (REP-ATK-PM-ZZZ-ZZZ-ZZZ-E-0193), Rev08, July 2012.
2. Atkins Limited (for the Olympic Delivery Authority), PDZ2 Follow On Projects (Stage 2) Consolidated Validation Reports (REP-ATK-PM-02Z-ZZZ-ZZZ-Z-0001), Rev05, October 2012.
3. Planning Application Approval (Olympic, Paralympic and Legacy Transformation Planning Applications: Facilities and their Legacy Conditions Planning Application, Application No – 07/90010/OUMODA, Date of Application - 7th February 2007): Condition 36.
4. Planning Application Approval (Olympic, Paralympic and Legacy Transformation Planning Applications: Site Preparation Planning Application, Application No – 07/90011/FUMODA, Date of Application - 7th February 2007): Condition 35.
5. Atkins (for London Organising Committee of the Olympic and Paralympic Games), Site Wide Remediation Method Statement (ATK-ES-O-XX-XX-ALL-MST-XX-0001), May 2012.
6. Atkins Limited (for the Olympic Delivery Authority), Retained Areas Risk Assessment (REP-ATK-CM-ZZZ-OLP-XXX-E-0007), Rev04, May 2012 (Decision Notice Ref: 11/90102/AODODA).
7. Atkins Limited (for the Olympic Delivery Authority), Retained Areas Risk Assessment – Addendum Report (0241-ENW-PWD-CM-REP-0001), 07 December 2012 (Decision Notice Ref: *Pending Consideration*).
8. Skanska Infrastructure Services, Landscape and Public Realm, Hard Landscaping – Validation Report for Construction of Main Concourse and Services (Drainage, Irrigation, Lighting, CCTV and PA) in PDZ2 (7170-LPR-SPK-REP-0009), Rev\_P02, March 2012.
9. Atkins Limited, Alluvium Penetration Report for PDZ2 (0241-OPS-SPK-C-REP-0002\_P02), May 2012, (Decision Notice Ref: 11/90313/VARODA).
10. Atkins Limited (for the London Organising Committee of the Olympic Games). Letter and enclosure from Atkins dated 18th December 2012: Olympic Park LOCOG Reinstatement Works Quality of Imported Fill Application (Rev 2, Final) reference 5082494/2006236/C003 rev2. (Decision Notice Ref: 12/00229/AOD).



## **DRAWINGS**

Drawing 1 (POP-A-O-XX-MP-CDM-SP-00-003 B03): Common Domain Overlay Site Plan

Drawing 2: PDZ2 Common Domain Overlay

Drawing 3 (0239-MPO-URB-T-DSP-5111): Olympic End Use

Drawing 4 (0241-ENW-PWD-C-DGA-0203): Legacy End Use

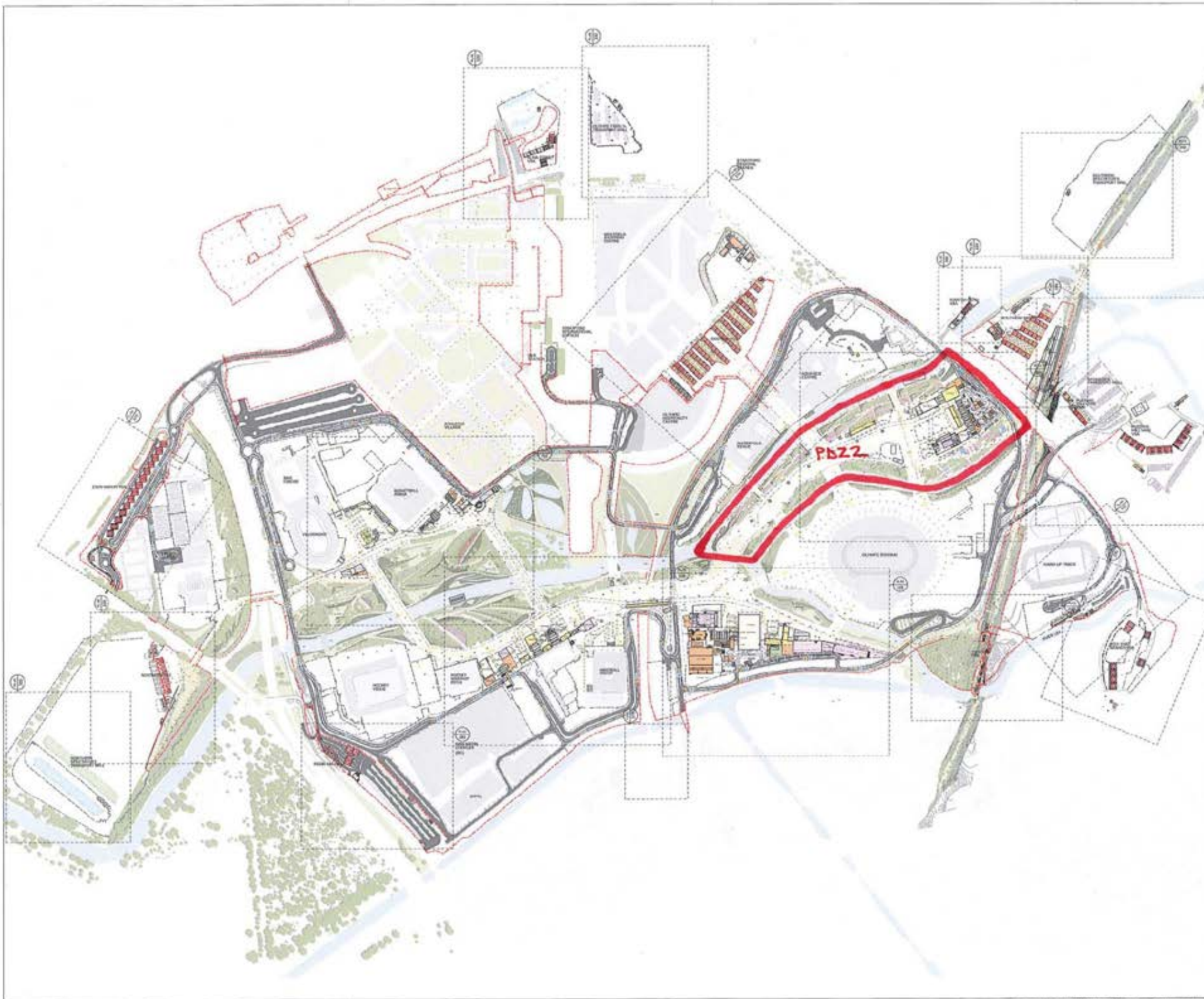
Drawing 5: SK-POP-2080\_Post Games Reinstatement Works South Park\_02

Drawing 6: Showcase Venue Reinstatement Areas - South Park

Drawing 7: Plan of LOCOG & Sponsor Showcase Validation Areas

Drawing 8: Pavement Area Key Plan

Drawing 9 (ATK-C-O-XX-XX-ALL-GE-XX-8055): Pavement Details



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**constituent groups & flows**

- spectators
  - athletes
  - athletes' staff
  - press
  - medical
  - sponsors
  - competitors
  - athletes' family
  - sponsors
  - access control
  - transport
  - spectator parking area
  - internet cable route
  - secure perimeter fence
  - access pending decision (see adjacent sheet)
  - spectator flow
  - transport flow
  - competitive flow
- (road used in blue only)

**PLEASE REFER TO REVISION DRAWING SET FOR DETAILS OF REVISIONS**

Author	
Designer	
Checker	
Approver	
Date	

**SAFETY: READ THE AND FOLLOW THE INSTRUCTIONS**  
 Based on the use of equipment and computer software working in an approved environment. It is the user's responsibility to ensure that the software is used in accordance with the instructions.

Scale	1:4000 @ A1; 1:8000 @ A3
North	
Relief	

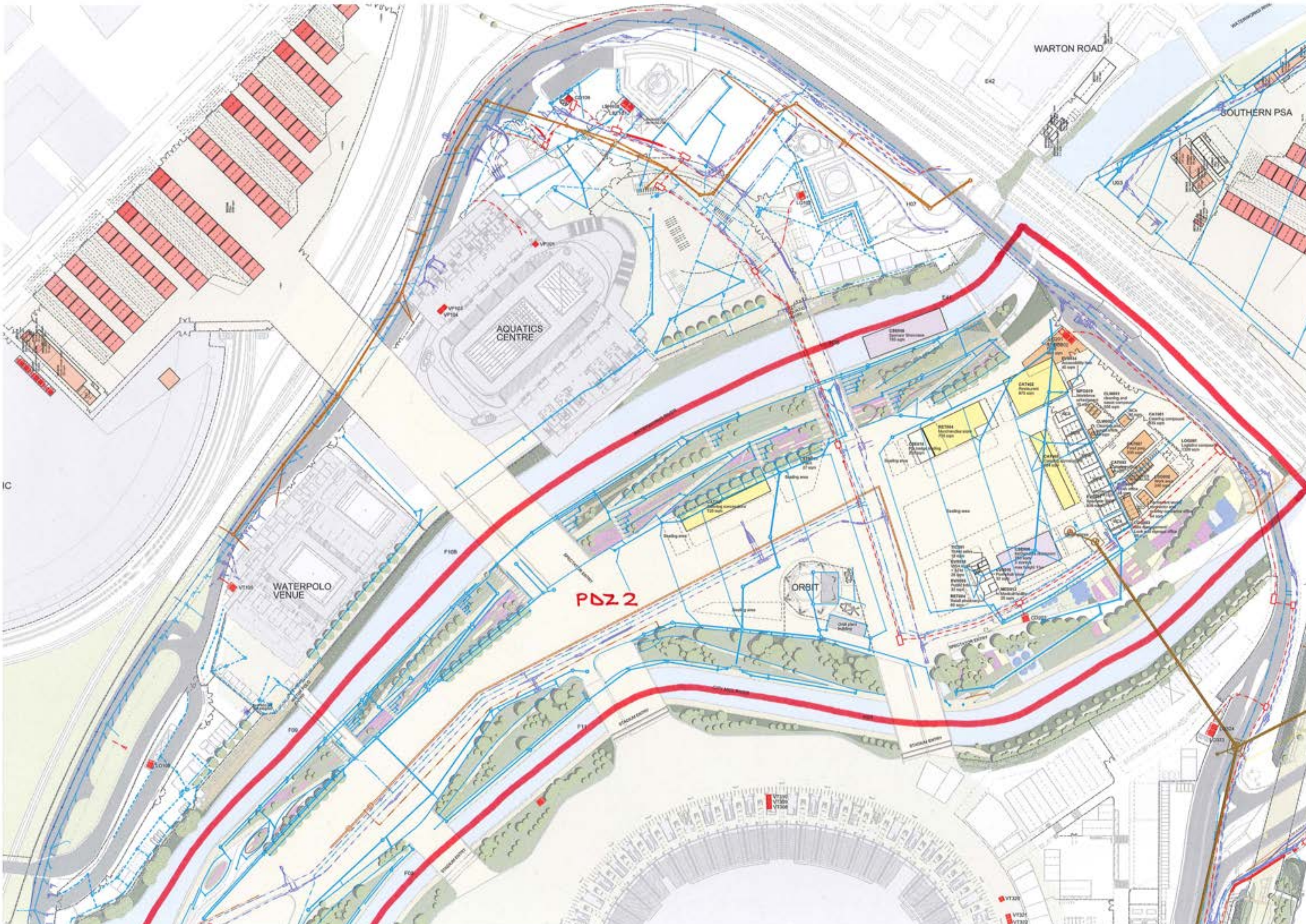


**Common Domain**

DRAWING TITLE  
**Overlay Site Plan  
 Ground Level**

STATUS	PRELIMINARY
Detailed Design	4251.01
PROJECT NUMBER	POP-A-0-XX-MP-CDM-SP-00-003
DATE	18.12.2009
SCALE (A1)	1:4000
SCALE (A3)	1:8000
DATE	18.12.2009
SCALE (A1)	1:4000
SCALE (A3)	1:8000
CHECKED	APPROVED





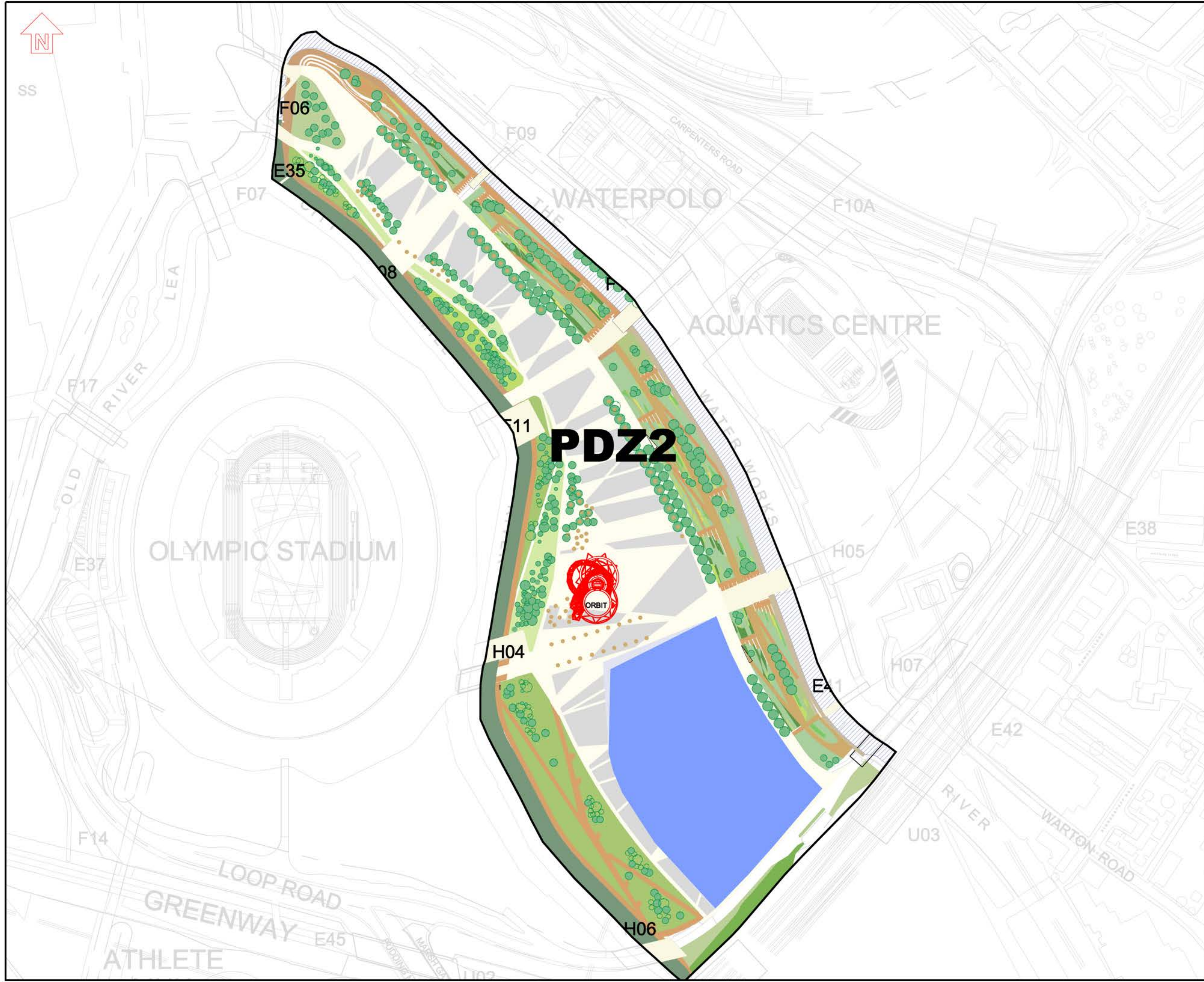




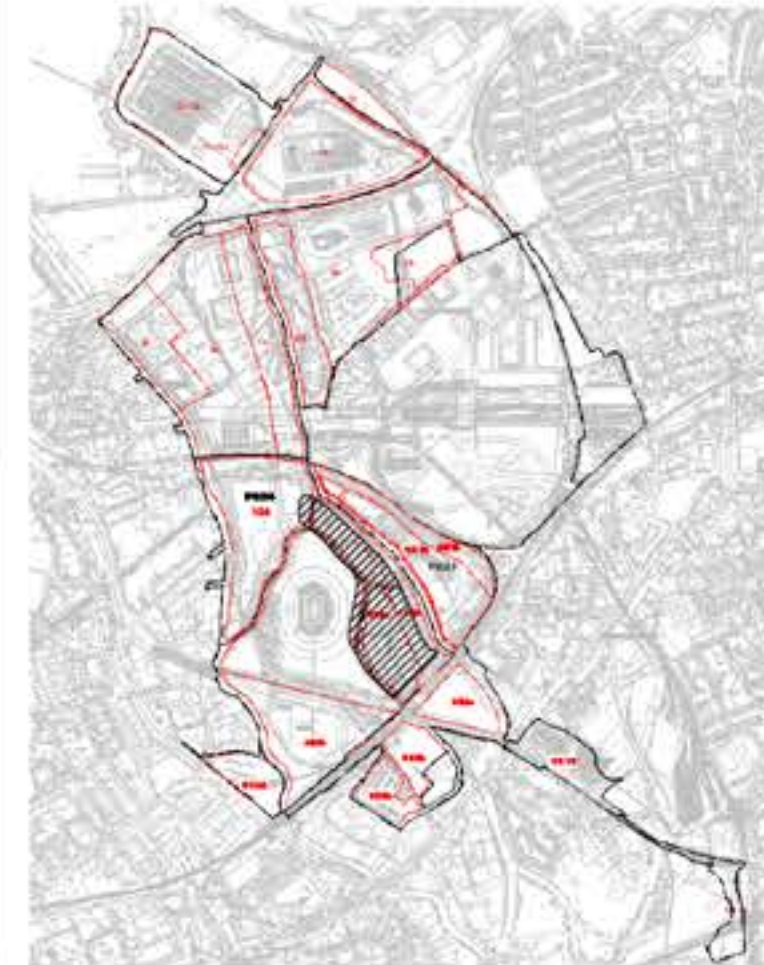




SS



- Legend**
- Planning Delivery Zone (PDZ2) Boundary
  - Future development plots
  - Un-assigned development plots



**NOTE:**  
Extract taken from drawing Ref: 0239-MPO-PWD-A-DPL-4042

No.	Description	Apr	N	DDMMYY
Rev	Description	Drawn	Chk'd	Date
Safety, Health and Environment Information				
In addition to the hazards / risks normally associated with the types of work detailed on this drawing, note the following risks and information:				
Construction	Cl			
	Cl			
	Cl			
Dismantling / Demolition (Future)	Di			
	Di			
	Di			

For information relating to Use, Cleaning and Maintenance see the Health and Safety File. It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

Creator  
**Prepared by**  
**ATKINS**  
On behalf of the ODA

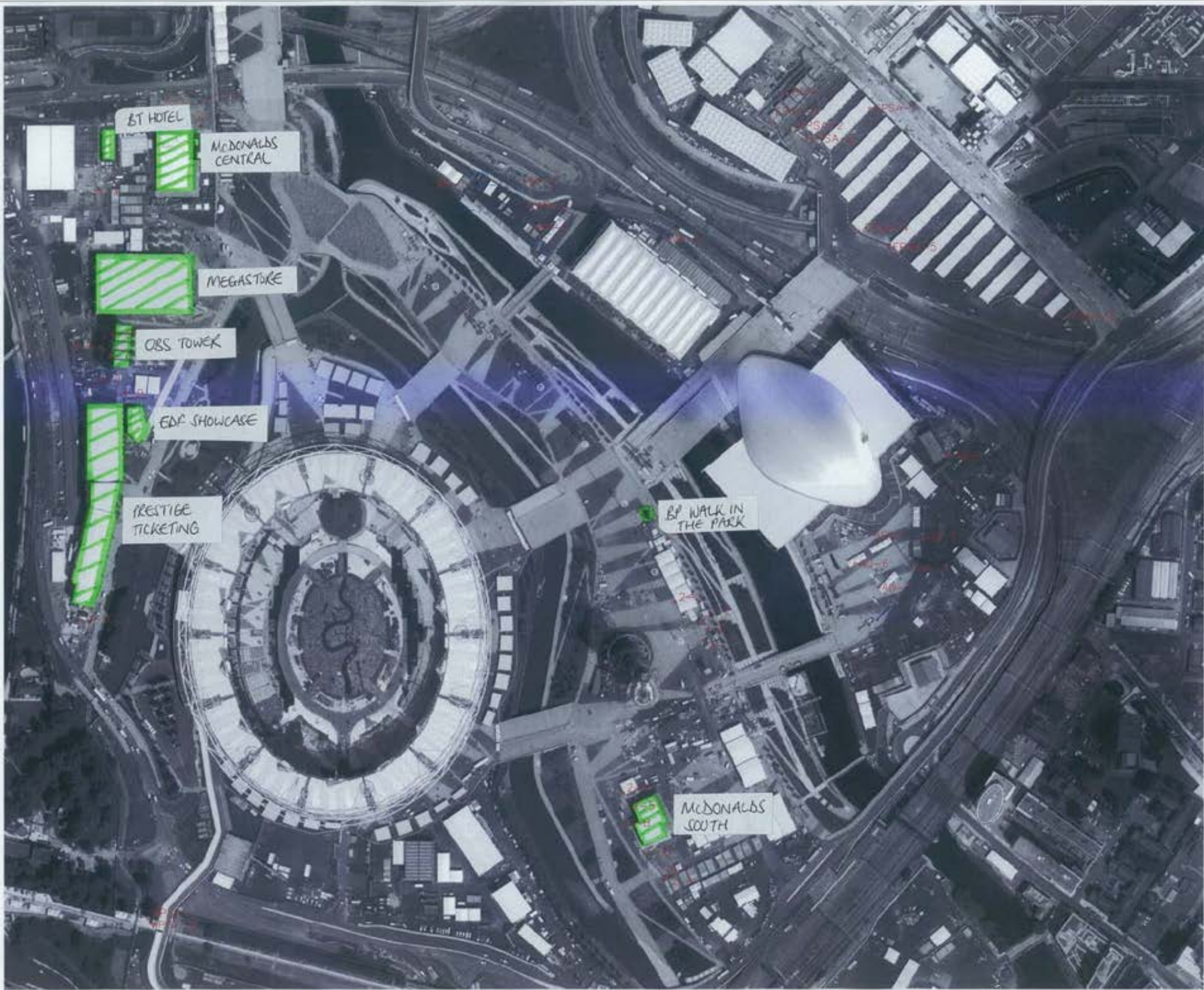
Drawing Title  
**Figure 3 Legacy End Use for Planning Delivery Zone 2**

Project Title <b>Olympic Park Remediation</b>			
Drawn	Checked	Approved	
Date 03/08/2012	Scale 1:1250	Size A1	
Purpose of Drawing <b>FINAL</b>			
Drawing No. 0241-ENW-PWD-C-DGA-0203	Sheet 01	Rev. A	









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1. EXTENT OF POP UP REINSTATEMENT IS INDICATIVE AND NOT TO SCALE.
2. FOR DETAILS OF BELOW GROUND DUCT ROUTES PLEASE REFER TO FIRE GAMES VENUE AND GDM RESOLVE DRAWINGS.
3. FOR REINSTATEMENT DETAILS IN EACH LOCATION PLEASE REFER TO REINSTATEMENT SCHEDULE: LOC-SCM-001 AND THE STANDARD DETAILS SKETCH: LOC-SK-001.

Legend:

-  TRENCH REINSTATEMENT
-  POP UP REINSTATEMENT
- P-6 ITEM CODE
-  SHOWCASE VENUE REINSTATEMENT

Rev Description Date  
 01 SAFETY, HEALTH AND ENVIRONMENT INFORMATION  
 Approved for construction for safety and environmental information. This will be used for the submission to the Local Authority.  
 02  
 03  
 04  
 05  
 06  
 07  
 08  
 09  
 10

No.	Description	Appr	Date

On behalf of the LCOOG  
 ATKINS  
 Olympic Park Design

DRAWING TITLE  
 POST GAMES LCOOG  
 REINSTATEMENT WORKS  
 SOUTH PARK  
 - SHOWCASE VENUES

STATUS AS BUILT PROJECTING

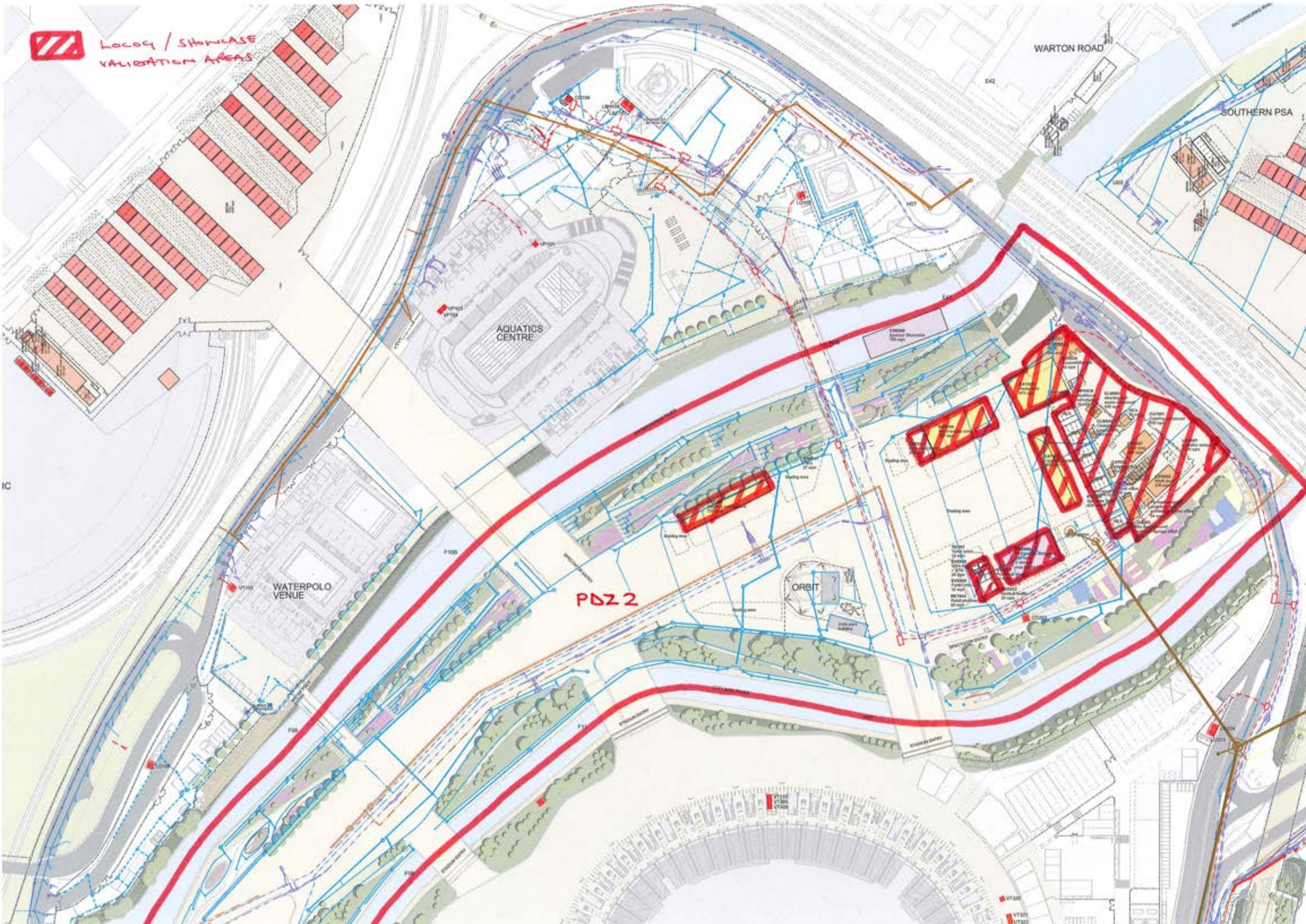
DRAWING NUMBER SK-POP-2080

DATE	SCALE	SHEET	TOTAL SHEETS
OCT '12	AS	A	02





Locoq / Showcase  
VALIDATION AREAS



WARTON ROAD

SOUTHERN PSA

AQUATICS CENTRE

WATERPOLO VENUE

PDZ 2

ORBIT

VT200  
VT201  
VT202











## **APPENDICES**

- Appendix A: Glossary of Terms and Definitions
- Appendix B: LOCOG Contractor Documentation (Validation Reports and Permit to Proceed (PTP) Applications)
  - Appendix B1: Sponsor Showcases
  - Appendix B2: Common Domain Areas
    - Appendix B2-1: BP Walk in the Park
    - Appendix B2-2: Zone 2 Utility Connections
    - Appendix B2-3: Temporary Structures
  - Appendix B3: Agreed Reinstatement Approach and Correspondence regarding the ISG Method Statement
  - Appendix B4: Groundwater Monitoring Borehole Information
- Appendix C: Permit to Proceed Protocol (PtP) (CD only)
- Appendix D: PPDT / Hyder Comments and Responses

## **APPENDIX A:**

### **Glossary of Terms and Definitions**



## Glossary of Terms and Definitions

Term	Meaning / Definition
CSM	Conceptual Site Model
CVR	Consolidated Validation Report
CZ	Construction Zone
GRS	Global Remediation Strategy
GQRA	Generic Quantitative Risk Assessment
DQRA	Detailed Quantitative Risk Assessment
EWFL	Enabling Works Formation Level
FFL	Final Finished Level
FoP	Follow-on Project
HHSL	Human Health Separation Layer
LLDC	London Legacy Development Corporation (formerly known as the and Olympic Park Legacy Company (OPLC) and London Development Agency (LDA).
LOCOG	London Organising Committee of the Olympic and Paralympic Games
ODA	Olympic Delivery Authority
ODA PPDT	Local Planning Authority (Olympic Delivery Authority Planning Decisions Team)
PAH	Polycyclic Aromatic Hydrocarbons
PDZ	Planning Delivery Zone
PPR	Parklands and Public Realm
RMS	Remediation Method Statement
RTD	River Terrace Deposits
SSAC	Site Specific Assessment Criteria
SSRS	Site Specific Remediation Strategy
SSRT	Site Specific Remediation Target

**APPENDIX B:**  
**LOCOG Contractor Documentation**  
**(Validation Reports and PTP Applications)**

## **APPENDIX B1: Sponsor Showcases**



LONDON ORGANISING COMMITTEE FOR  
THE OLYMPIC AND PARALYMPIC GAMES

LONDON 2012 OLYMPIC PARK

Glanville Consultants Limited

**Remedial Works Completion and Validation**

Project specific  
validation report for  
McDonald's Restaurant  
Ltd South CZ2a  
Draft

May 2012



**Document Control**

JOB NUMBER:			LOCOG DOCUMENT REF: e.g.			
Revision	Purpose and Description	Originated	Checked	Reviewed	Authorised	Date
00	For Approval					(06/12)

## Work Package Details

<b>Introduction</b>	<p>This report identifies the work carried out below ground level with particular reference to the impact on the remediation of the site.</p> <p>The report contains details of the Piling Risk Assessment, the piling work and the below ground drainage and services required for the temporary building.</p>
<b>Works location and related Planning Conditions &amp; Application</b>	<p>McDonald's Restaurant South – Area CZ2A Olympic End Use - Pedestrian concourse (Olympic Park Concourse Areas, London Within Planning Delivery Zones 2 and 4)</p>
<b>Name of the works</b>	<p>McDonald's Restaurant South End Use – Pedestrian concourse</p>
<b>Description of the works</b>	<p>The construction of the temporary building for use as a restaurant during the games and its subsequent removal. The main elements of work are:</p> <ul style="list-style-type: none"> <li>• Driven steel tubular piles</li> <li>• Steel cross members at the underside of the building</li> <li>• Incoming services and underground drainage</li> <li>• Temporary building fitted out as a fast food restaurant</li> <li>• Removal of the building services and piling to 2.0m below final ground level</li> </ul> <p>PTP Ref 0062-FPL-PRW-001</p> <p>Drawing 4100400-200 – Site Survey Drawing 4100400-2010J – Proposed Pile Layout Drawing 4100400-2011K – Pile Cut off Table and Details Drawing 4100400-2401A – Typical Section</p>
<b>Key parties involved with the works</b>	<p>Client - London Organising Committee of the Olympic Games (LOCOG) Sponsor / Showcase - McDonald's Restaurants Ltd Principal Contractor - Barlow Group Ltd</p>
<b>Previous related submissions</b>	<p>Site Wide Remediation Method Statement (ATK-25-0-XX-ALL-RISK-XX-001) Harrison Group Environmental Ltd – Ground Investigation Phase 1 report CZ2A – Thornton Fields (non-operational) – Project ID EGL 356763a – Document reference REP-ENLCE02a-OLP-SP1-E-0010 REV01 Atkins – Site Specific Remediation Strategy – Construction Zone 2a – Document Reference REP-ATK-CM-02a-OLP-XXX-E-0002 – April 2008 Atkins – Site Specific Remediation Strategy Addendum to Final Report – Construction Zone 2a – Document Reference REP-ATK-CM-02a-OLP-XXX-E-0003 – May 2008 Atkins – Site Specific Remediation Strategy Addendum No 2 – Construction Zone 2a – Document Reference REP-ATK-CM-02a-OLP-XXX-E-0007 – December 2008 Atkins – cover letter SSRS addendum (criteria for asbestos fill material) Document Ref LET-ATK-TZ-ZZZ-OLP-AP1-E-0010 July 2008 Document Ref 0241-ENW-ATK-LET-00268 February 2009</p>



	Document Ref 0241-ENW-ATK-LET-00276 March 2009 WSP Olympic Park CZ2a RTD Groundwater (Zone 1 and Zone 2 LNAPL) Verification report – Document Ref REP-ENL-CE-02a_OLP-SP1-E-0222-01 – October 2009 Final Report Issue 3 Halcrow – Addendum to the Construction Zone 2a and 2b Unsaturated Zone Validation Report – Document Ref REP-ENL-CK-02Z-OLP-SP1-E-0320-04 RSK Ltd - Piling Risk Assessment – Olympic Site C22a - 25095-02 - Dec 2011		
<b>Wayleaves</b>	Not applicable		
	<b>Validation Details</b>		
<b>Final surface</b>	No works were carried out beyond the building footprint. Building FFL 9.870m		
<b>Excavations</b>	Maximum excavation depth 1.5m		
	Fill Quantities Type 1 - 20 tonnes Gravel - 40 tonnes		
<b>Use of imported fill</b>	Imported materials were used as shown in drawings 4100400-2010J – Proposed Pile Layout 4110400-2011K – Pile cut off Table and Details		
<b>Use and distribution of hard cover</b>	Not applicable.		
<b>Instances of unexpected contamination</b>	None found.		
<b>Piling foundation works</b>	Approved Piling Risk Assessment – RSK Ltd Olympic - Site CZ2a 25095-02 - Dec 2011		
<b>Gas and vapour protection measures</b>	Ventilation of the under floor void as set out in the Piling Risk Assessment.		
<b>Outstanding works to complete remediation</b>	Removal of the building and piles to 2m BFL post games. Making good of surfaces.		
<b>Concluding statement</b>	The works have been completed in line with the approved remediation documentation.		
<b>Confirm that the works have been completed:</b>			
<b>Signed by:</b>	<b>Print Name:</b> 	<b>Signature:</b> 	<b>Date:</b> 01.06.12
<b>For and on behalf of:</b>	GLANVILLE CONSULTANTS LIMITED		

## Drawings and As-built Plans

General Location Plan, Sample Location Plan and As-built Drawings
---

<b>Drawings</b>
-----------------

4100400-200 – Site Survey
---------------------------

4100400-2010J – Proposed Pile Layout (as built)
---

4100400-2011K – Pile Cut off Table and Details (as built)
---

4100400-2401A – Typical Section (as built)
--

## References

Design and Management Documents Used To Support the Remediation Works
---

Not applicable
----------------

## Appendices

PTP (closed)

Photographs



London 2012 Olympic Park		PERMIT TO PROCEED	
<b>PROTECTION OF REMEDIATION WORKS: FORM ATK-084</b>			
<b>PTP Reference: 0065_McDS_PRW_0001</b>			
<p>Dear Sirs,            With respect to the protection and maintenance of previously completed ground remediation works and site specific remediation strategies we hereby submit this Permit to Proceed application for our intrusive works and for your acceptance. We understand we initially require your completed section B <u>prior to commencement</u> of our works and that <u>we are responsible for the integrity of the remediation works</u>.</p>			
<b>SECTION A</b> <i>(Please complete &amp; submit to <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> 5 days prior to works)</i>			
Prepared by	██████████	Authorised by	██████████
of Company	Barlow Group	of Company	LOCOG
Date	04.01.12	Date	04.01.2012
Follow on Project	McDonalds Restaurant	Principal Contractor	Barlow Group Ltd
Title of Works	McDonalds South	FOP Doc Reference	<i>(if different from PTP reference)</i>
Construction Zone	Zone 2	Works Start Date	16 <sup>th</sup> January 2012
LA Site Reference	LA8680-4/8680-1/8580-1/8580-3/9300	Works Finish Date	30 <sup>th</sup> May 2012
Co-ordinates of works	Piling: 27916,13877. 27907,13895. 27912,13897. 27905,13911. 27928,13922.27943,13890		
Drawing Reference	4606_04 Rev C - Pile Co-Ordinates setting out and drainage routes		
Description of works	Excavation of trial holes / trenches / drainage channels <b>Update 1/06/12: shallow drainage carried out above ML. No trial pits completed. All above ML materials were reused in the same area of the site.</b>		
Dimension of works (incl. depth)	50 x 20m x 140mm driven steel tubes for piling - No spoil created		
Method Statement Reference(s)	See Attached		
Piling Risk Assessment Ref.	25095-02(01) – Contractor confirmed approval by EA 12/01/2012		
Existing Marker layer depth	450mm		
Earthworks above marker layer (m <sup>3</sup> )	Type 1 and Asphalt		
Earthworks below marker layer (m <sup>3</sup> )	N/A		
Historic boreholes at vicinity of works	<b>None encountered</b>		
Planned backfill material types	Re-instate plus clean type 1 above marker layer		
Additional Comments:			
<b>SECTION B</b> <i>(Completed by and returned from Permit to Proceed Team prior to works)</i>			
Prepared by	██████████	Authorised by	██████████
of Company	Atkins	of Company	Atkins
Date	12/01/2012	Date	12/01/2012
Accepted	Yes		

Conditions of acceptance / reason for non-acceptance:

- All permanent backfill materials shall be compliant with the CZ2a Site Specific Remediation Specifications and shall maintain the integrity of ground layers in accordance with CZ2a Site Specific Remediation Strategies. For imported materials, contractors are also required to comply with: Facilities and their Legacy Transformation Planning Application, No. 07/90010/OUMODA, Condition OD.0.39 'Quality of Imported Fill' via liaison with the ODA Planning Decisions Team.
- Contractors are required to produce validation reports for any excavation/fill exercises to be submitted to the ODA Planning Decisions Team in order to achieve planning discharge.
- Marker Layer and Human Health Separation Layer soils should be placed / replaced as part of these works in accordance with Site Remediation Strategies and Specifications. Please ensure that installed Marker Layer ties-in with Marker Layer levels of adjacent areas.
- Any arisings should be stored in a manner that prevents contamination of any remediated Made Ground or Human Health Separation Layer (HHSL) soils and so that materials can be managed to optimise their re-use and subsequent processing (or where necessary treatment). All Separation Layer materials shall be segregated from any other arisings so that it is conserved without deterioration of quality, as far as is reasonably practical.
- Any material suspected to contain contamination should be segregated and the PTP Team should be informed. If additional remedial excavations/works are deemed necessary, the requirements of Planning Condition OD.0.38 (unexpected contamination) may apply.
- Excavations/piling activities that penetrate the alluvium may create a pathway which allows any perched water within the made ground to contaminate the minor aquifer in the river terrace deposits. You should therefore consider this risk and if appropriate install measures to ensure that no contamination occurs and that you are able to validate the site once works are complete. This should involve prior consultation with the Remediation Designers for CZ2a and / or PDT.
- NBHCZ2a-601 and NBHCZ2a-605 are in the proximity of your works (see Borehole summary.pdf attached). Please ensure these wells are protected and retained.
- Further to the assessment of excavated materials, movement of those materials from the site shall be arranged via appropriate Soil Hospital ATK-088 documentation and tracked using the ODA Park-wide M<sup>3</sup>n system, noting recent changes to the Soil Hospital Protocol under REP-ATK-CM-ZZZ-ZZZ-ZZZ-E-0009.
- As agreed with Park Operations, underground obstructions (including piles, drainage and ducts) shall be removed to 2m below final ground level following removal of the temporary structure.
- Please ensure that appropriate records of the works are maintained in order to allow you to complete the following Section C of this document upon completion of the works (including records of Marker Layer and Separation Layer reinstatement, earthworks volumes, SMARTStart / M<sup>3</sup>n data entry, as-built records and frequency of validation sampling undertaken during the works).
- See also earlier comments on method statement reference: 25095-02(01).

**Distribution:** *Originating Team, Principal Contractor, CLM Project Manager, RemTech Team.*

**SECTION C** *(Please complete and return to [permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com) on completion of the works)*

Dear Sirs,

We confirm completion of works in accordance with the methods described in Section A and conditions described in Section B. On the basis of the following information and the attached supporting documents, we request that this application be formally closed.

Prepared by	██████████	Authorised by	██████████
of Company	Barlow Group	of Company (PC)	LOCOG
Date	01.06.12	Date	01.06.2012

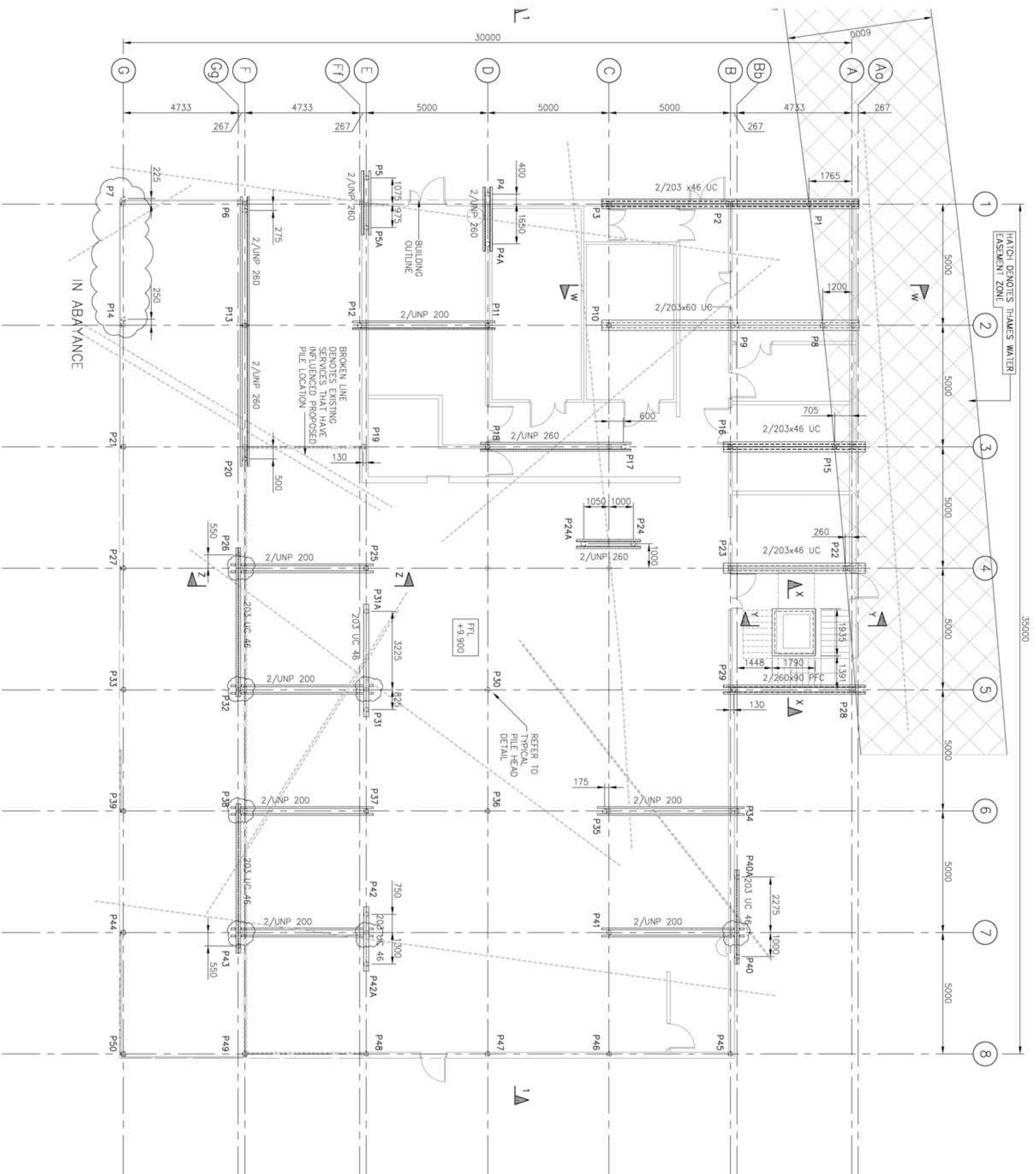
C1: COVER LAYER	Reinstated	Altered	Omitted
Marker Layer	Yes	No	No
Human Health Separation Layer	No	No	No
Comments or description of cover system reinstatement	Type 1 and Asphalt		
Photo record of excavation and Marker Layer reinstatement	<i>(Attach photograph record document)</i>		
As-Built drawings provided	<i>(Attach as-built drawing or sketch indicating cover system reinstatement)</i>		



<b>C2: EXCAVATED VOLUMES</b>	<b>Above Marker Layer (m<sup>3</sup>)</b>		<b>Below Marker Layer (m<sup>3</sup>)</b>	
Total cut	150mm Type 1 – 10m <sup>3</sup>		N/A	
Cut volume retained (on site)	150mm Type 1 – 10m <sup>3</sup>		N/A	
Cut volume to Soil Hospital	N/A		N/A	
Cut volume sent off Olympic Park	N/A		N/A	
Related ATK-088 Export Application(s):				
SMARTWaste References	<i>(Attach spreadsheet from SMARTStart detailing relevant entries)</i> N/A			
<b>C3: FILL VOLUMES</b>	<b>Above Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>	<b>Below Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>
Total fill				
Site won fill (reused)				
Fill from Soil Hospital				
Fill from outside Olympic Park				
Related ATK-088 Import Application(s):				
Additional Comments: During the "reinstatement" works post-Games, the piles will be withdrawn to a set level yet to be agreed.				
<b>SECTION D</b> <i>(Application is closed by the Permit to Proceed Team following review of Section C and returned to FOP Team)</i>				
Prepared by	██████████	Authorised by	██████████	
of Company	Atkins	of Company	Atkins	
Date	08/06/2012	Date	08/06/2012	
Accepted & Closed	Yes			
Comments or conditions on closure / reason for non-closure of application:  Permit closed noting above comments (summarised below): <ul style="list-style-type: none"> <li>• Shallow drainage completed at a depth which did not compromise Marker Layer</li> <li>• No spoil generated during installation of piles</li> <li>• Piles to be cut to agreed level during Transformation/Legacy works.</li> </ul>				
<b>Distribution:</b> <i>Originating Team, Principal Contractor, CLM Project Manager, RemTech Team, EW Project Manager.</i>				



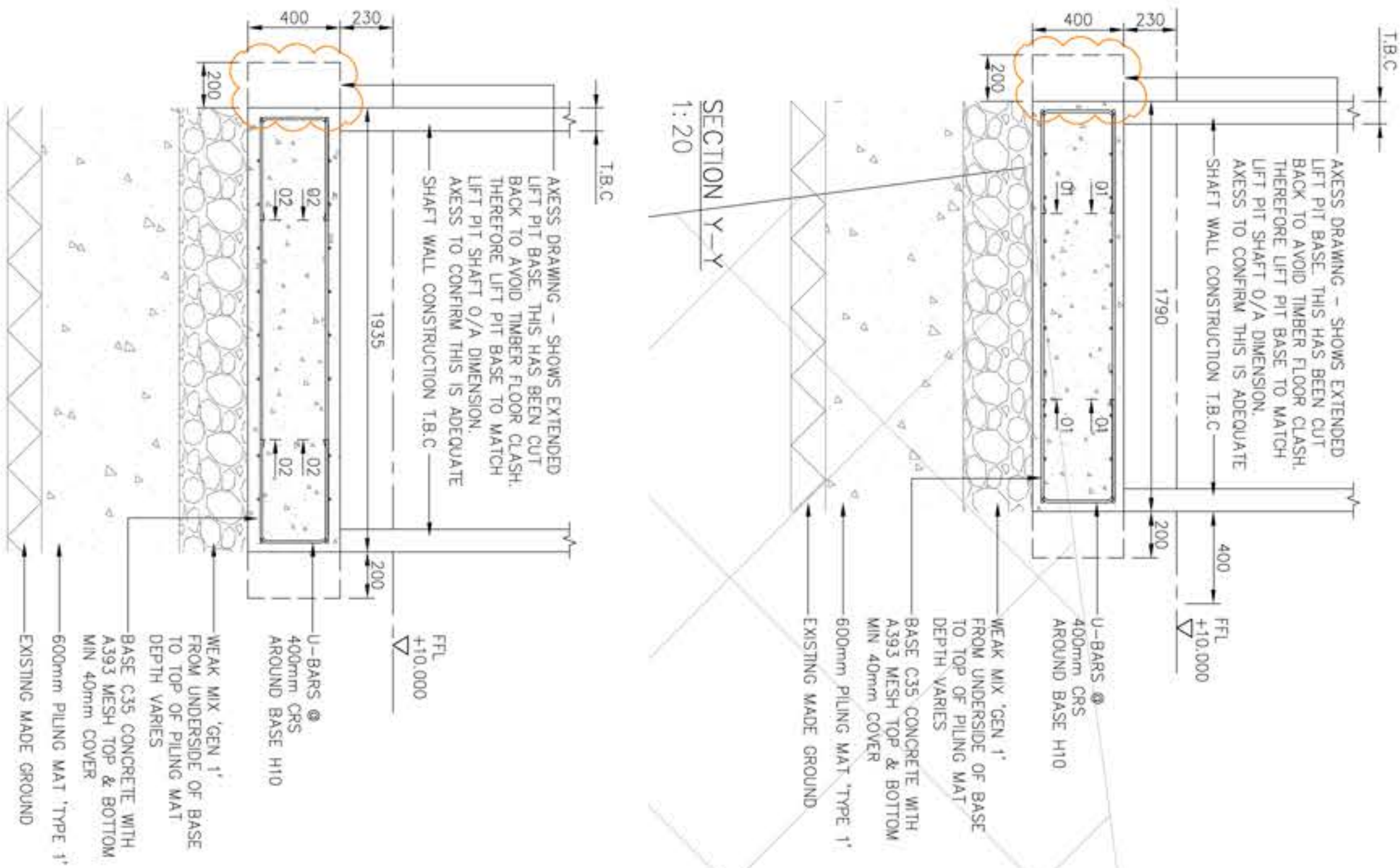




GENERAL ARRANGEMENT OF PILING LAYOUT AND BRIDGING BEAMS  
1:100

PILING NOTES:

- The specialist-piling contractor is responsible for the design of the piles to accommodate the vertical working loads given. Copies of pile calculations are to be submitted to the engineer for approval prior to the works commencing.
- An overall factor of safety of 2.5 to be adopted for the design of the piles.
- All piling works to comply with the ICE specification for piling.
- Piles to be installed within the following tolerances:
  - Maximum deviation from pile position 75mm
  - Maximum deviation from pile vertically 1 in 75. The piling contractor is to provide a detailed survey of all completed pile positions together with identification of all piles cast out of tolerance.
- Concrete mix -  
Minimum compressive strength at 28 days - 40N/mm<sup>2</sup> (C28/35)
- For pile cut-off table please refer to drawing 4100400-2011



SECTION X-X  
1:20

BENDING SCHEDULE

Member	bar mark	Type + size	No. of bars	No. of bars in each	total No.	length of each bar +	shape code	A*	B*	C*
lift shaft	01	H10	1	12	12	1200	21	450	320	450
base	02	H10	1	12	12	1175	21	450	300	450

NOTES

- This drawing must not be scaled; work to figured dimensions only.
- This drawing is to be read in conjunction with all relevant drawings, documents and specifications.
- All hot-rolled steel to be grade S275 or S355 (hollow sections) in accordance with BS EN 10 025
- Steework contractor is responsible for the design of all connections.
- Beam/Column connection also to be designed for bending moment of 7.5kNm
- All welding to be in accordance with BS 5135. Minimum fillet welds to be 5mm. All butt welds to be full penetration/strength.
- All dimensions other than grid lines are to centre lines of symmetrical steel sections or to the back of channel and angle sections. Offsets are measured in the direction of displacement.
- Where site dimensions are indicated, steework contractor to carry out site check prior to commencement of fabrication.
- Fabrication drawings and calculations are to be submitted to Glanville Consultants for comment not less than 14 days prior to fabrication.
- The Steework Contractor is responsible for the design and provision of all temporary bracing required for the erection and stability of the frame during alignment. The bracing should not be removed or tampered with until completion of the permanent structure to the satisfaction of the Engineer.
- For typical sections and details please refer to drawing 4100400-2011

FFL TO BE CONFIRMED BY ARCHITECT

PLEASE NOTE: CAPPING PLATE SIZE AND HOLES ASSUMED T.B.C ONCE DETAIL DESIGN RECEIVED FROM PILING CONTRACTOR

PROPOSED PILE LOCATIONS TO BE CONFIRMED

Rev	Description	Date	CHKD
A	Pile layout revised to suit new scheme	21.09.11	

**Glanville**  
3 Goodlands Business Centre  
Bourdon Way  
Hemel Hempstead, Herts, HP2 7TE  
Tel: (0142) 85999 Fax: (0142) 25824  
info@glanville.com www.glanville.com

**McDonnells**  
RESTAURANT

Project: **McDONNELLS**  
**OLYMPIC PARK LONDON 2012**  
**ZONE 2 SOUTH**

Title: **PROPOSED PILE LAYOUT**

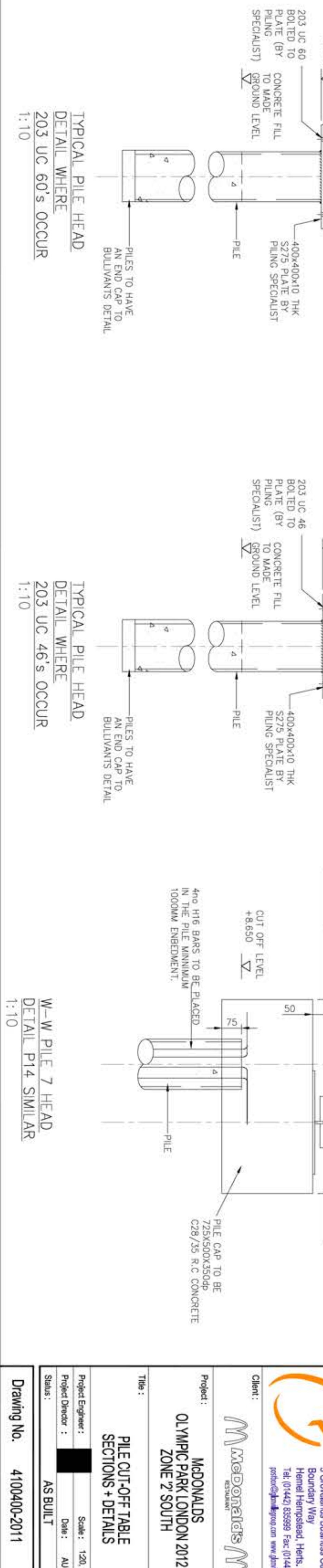
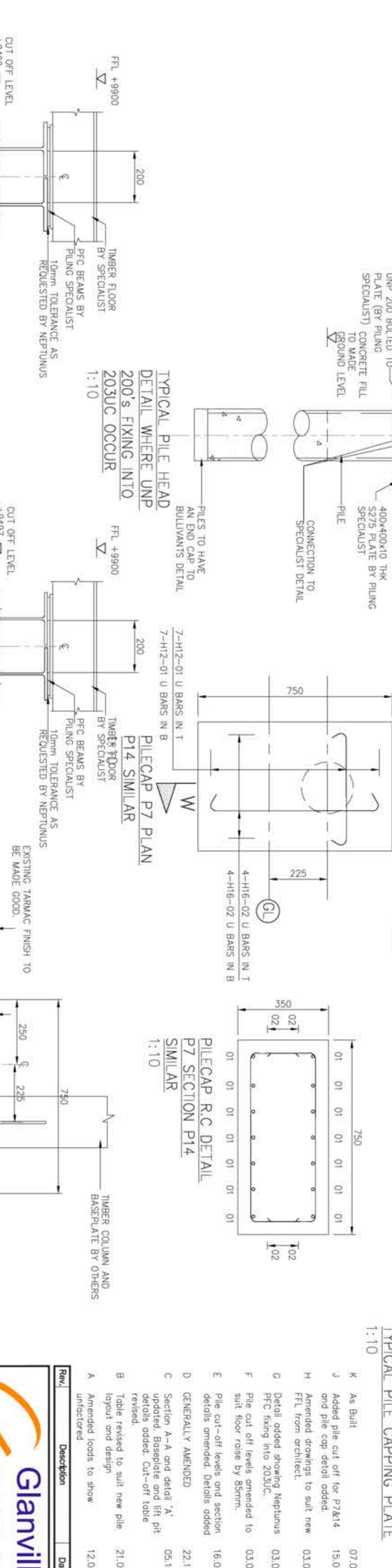
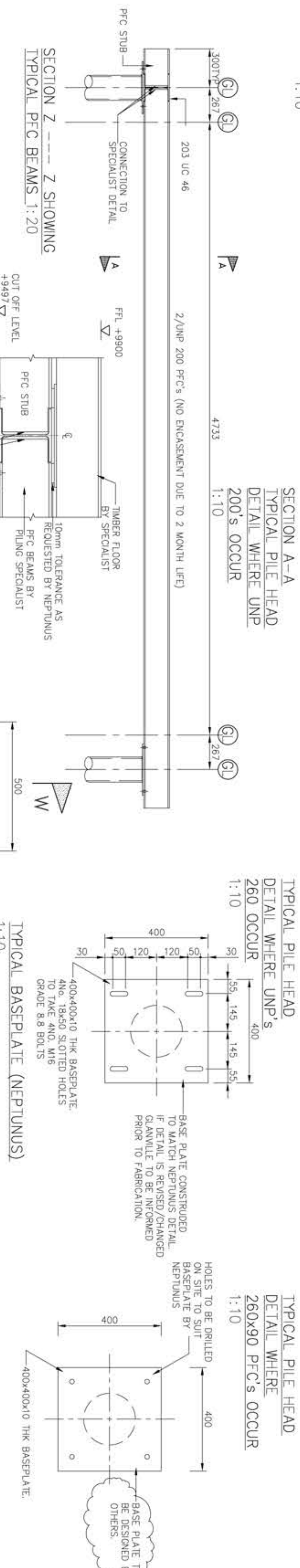
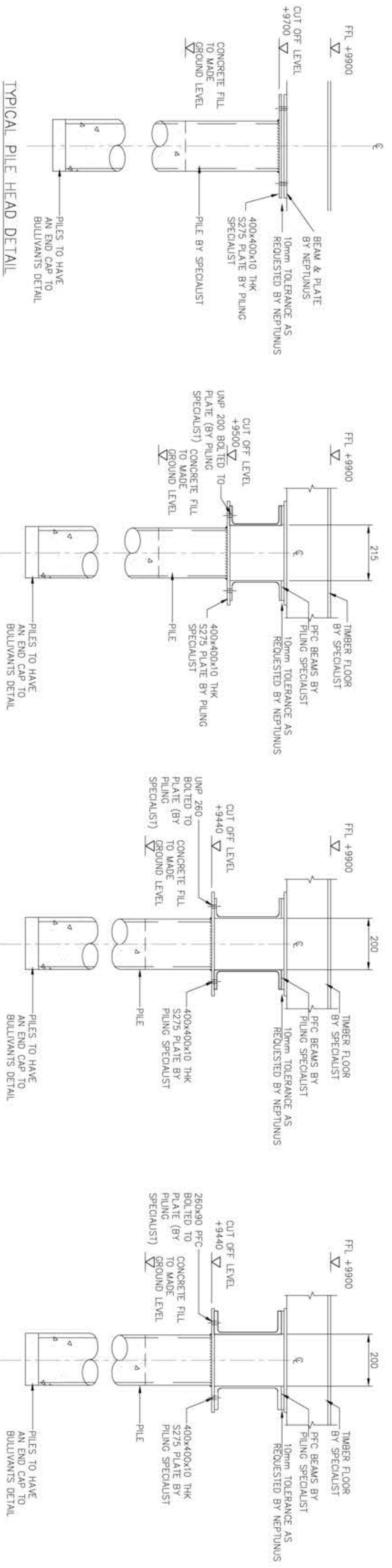
Project Engineer: **AS BULL** Scale: 1:100, 1:20 @ A1  
Project Director: **AS BULL** Date: AUG 2011  
Status: **AS BULL**

Drawing No. **4100400-2010** Rev **J**



PILE REF	CUT OFF LEVEL	SAFE WORKING LOAD (kN)	HORIZONTAL LOAD (kN)	COLUMN UPLIFT (kN)
P1	+9497	80	7	-
P2	+9497	80	7	-
P3	+9497	80	7	-
P4	+9440	80	7	-
P4A	+9440	80	7	-
P5	+9440	45	7	-
P5A	+9440	45	7	-
P6	+9440	20	7	-
P7	+8650	15	7	-
P8	+9497	15	7	-
P9	+9490	135	7	-
P10	+9490	125	7	-
P11	+9500	175	7	-
P12	+9500	125	15	30
P13	+9440	20	15	30
P14	+8650	20	7	-
P15	+9497	195	15	30
P16	+9497	135	7	-
P17	+9440	120	7	-
P18	+9440	175	7	-
P19	+9700	135	15	30
P20	+9440	45	7	-
P21	+9700	20	7	-
P22	+9497	160	15	30
P23	+9497	135	7	-
P24	+9440	125	7	-
P24A	+9440	125	7	-
P25	+9500	155	15	30
P26	+9497	100	15	30
P27	+9700	20	7	-
P28	+9440	40	7	-
P29	+9440	160	7	-
P30	+9700	200	7	-
P31	+9497	135	15	30
P31A	+9497	135	15	30
P32	+9497	100	15	30
P33	+9700	20	7	-
P34	+9440	110	15	30
P35	+9440	240	7	-
P36	+9700	175	7	-
P37	+9440	135	15	30
P38	+9440	100	15	30
P39	+9700	20	7	-
P40	+9497	115	15	30
P40A	+9497	115	15	30
P41	+9497	N/A	7	-
P42	+9497	155	15	30
P42A	+9497	155	15	30
P43	+9497	100	15	30
P44	+9700	40	7	-
P45	+9700	150	7	-
P46	+9700	75	7	-
P47	+9700	150	7	-
P48	+9700	75	7	-
P49	+9700	40	7	-
P50	+9700	15	7	-

PILE CUT-OFF LEVELS (m)



FOR GENERAL NOTES & CA  
DRAWING PLEASE REFER  
TO DRAWING:-  
4100400-2010

<b>Client:</b> Mcdonalds 3 Gornolds Business Centre Bourne Way Home Farmstead, Herts, HP2 7TE Tel: (0142) 85599 Fax: (0142) 25824 post@glanville.com www.glanville.com	
<b>Project:</b> MCDONALDS OLYMPIC PARK LONDON 2012 ZONE 2 SOUTH	
<b>Title:</b> PILE CUT-OFF TABLE SECTIONS + DETAILS	
<b>Project Engineer:</b> AS BUILT <b>Project Director:</b> AS BUILT <b>Scale:</b> 1:20, 1:10 @ A1 <b>Date:</b> AUG 2011	<b>Rev</b>   <b>Description</b>   <b>Date</b>   <b>Drawn</b> K   As Built   07.06.12 J   Added pile cut off for P7&14 and pile cap detail added.   15.02.12 H   Amended drawings to suit new FTL from architect.   03.02.12 G   Detail added showing Neptunus PFC fixing into 203UC.   03.02.12 F   Pile cut off levels amended to suit floor raise by 85mm.   16.01.12 E   Pile cut-off levels and section details amended. Details added.   22.12.11 D   GENERALLY AMENDED.   05.10.11 C   Section A-A and detail 'X' updated. Baseplate and fit pit details added. Cut-off table revised.   21.09.11 B   Table revised to suit new pile layout and design.   12.08.11 A   Amended loads to show uncontracted.   12.08.11

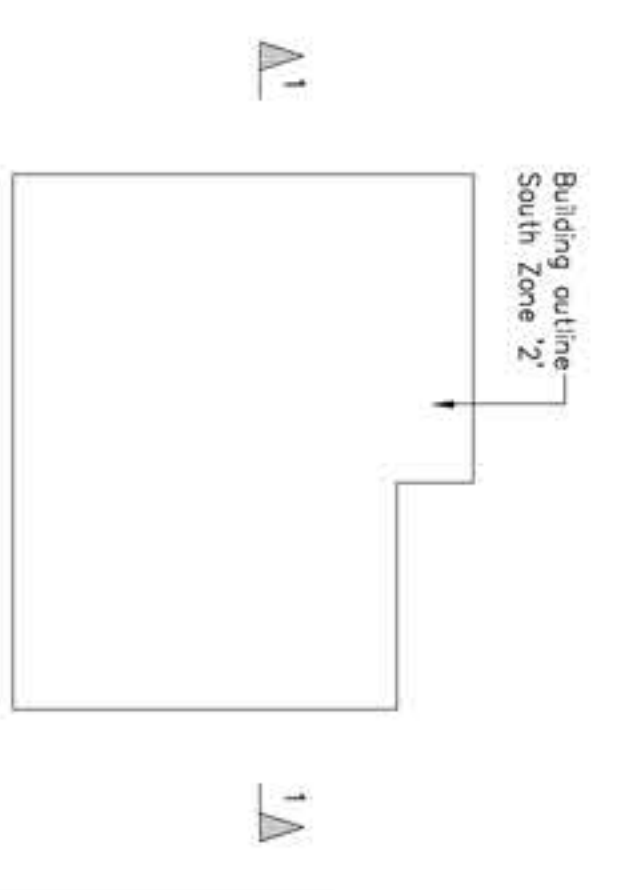
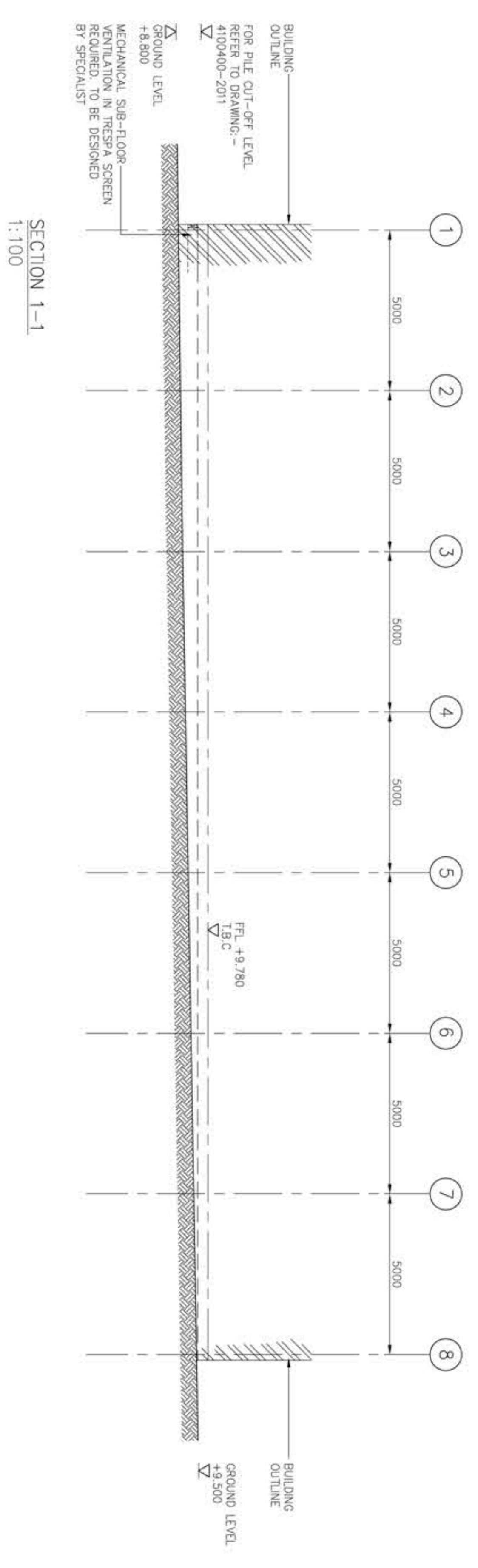


This drawing should not be scaled. For construction purposes work to figured dimensions only

0mm 50mm 100mm

ORIGINAL SHEET SIZE A1

- NOTES**
1. This drawing must not be scaled; work to figured dimensions only.
  2. This drawing is to be read in conjunction with all relevant drawings, documents and specifications.
  3. To be read in-conjunction with drawings:- 4100400-2010, 2011 & 2012



**KEY PLAN**

Rev	Description	Date	CHKD
A	As Built	07.06.12	

**Glanville**  
3 Gowlands Business Centre  
Bourdon Way  
Hemel Hempstead, Herts, HP2 7TE  
Tel: (0142) 855959 Fax: (0142) 258924  
info@glanville.com www.glanville.com

**McDonaldis**  
RESTAURANT

**Project:** McDONALDS OLYMPIC PARK LONDON 2012 ZONE 2 SOUTH

**Title:** TYPICAL SECTION 1-1

**Project Engineer:** Scale: 1:100@A1

**Project Director:** Date: JAN 2012

**Status:** AS BUILT

**Drawing No.:** 4100400-2401

**Rev** A

## **APPENDIX B2: Common Domain Areas**



**B2-1: BP Walk in the Park  
(0063\_ISGL\_PRW\_0012)**

London 2012 Olympic Park		PERMIT TO PROCEED	
<b>PROTECTION OF REMEDIATION WORKS: FORM ATK-084</b>			
<b>PTP Reference: 0063_ISGL_PRW_0012</b>			
Dear Sirs, With respect to the protection and maintenance of previously completed ground remediation works and site specific remediation strategies we hereby submit this Permit to Proceed application for our intrusive works and for your acceptance. We understand we initially require your completed section B <u>prior to commencement</u> of our works and that <u>we are responsible for the integrity of the remediation works</u> .			
<b>SECTION A</b> (Please complete & submit to <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> 5 days prior to works)			
Prepared by	██████████	Authorised by	██████████
of Company	ISG	of Company	ISG
Date	25/05/12	Date	25/05/12
Follow on Project	N/A	Principal Contractor	ISG
Title of Works	CDM Zone 2 BP Walk in the Park sculpture foundations	FOP Doc Reference	(if different from PTP reference)
Construction Zone	CZ2b	Works Start Date	28/05/12
LA Site Reference	LA9500	Works Finish Date	08/07/12
Co-ordinates of works	G3687		
Drawing Reference	BP WitP Zone 2 location drawing & Foundation drawing		
Description of works	Excavation for concrete foundation for BP Walk in the Park sculpture		
Dimension of works (incl. depth)	Maximum depth of 1500mm		
Method Statement Reference(s)	KBW Ltd CFE018 Rev B		
Piling Risk Assessment Ref.	N/A		
Existing Marker layer depth	Approx 600mm		
Earthworks above marker layer (m <sup>3</sup> )	23		
Earthworks below marker layer (m <sup>3</sup> )	22		
Historic boreholes at vicinity of works	N/A		
Planned backfill material types	Mostly filled with concrete. Reuse of clean above marker layer material.		
Additional Comments:			
<b>SECTION B</b> (Completed by and returned from Permit to Proceed Team prior to works)			
Prepared by	██████████	Authorised by	██████████
of Company	Atkins	of Company	Atkins
Date	30/05/2012	Date	30/05/2012
Accepted	Yes		
Conditions of acceptance / reason for non-acceptance:			
<ul style="list-style-type: none"> <li>All permanent backfill materials shall be compliant with the CZ2a Site Specific Remediation Specifications and shall maintain the integrity of ground layers in accordance with CZ2a Site Specific Remediation Strategies. For imported materials, contractors are also required to comply with: Facilities and their Legacy Transformation Planning Application, No. 07/90010/OUMODA, Condition OD.0.39 'Quality of Imported Fill' via liaison with the ODA Planning Decisions Team.</li> </ul>			



- Contractors are required to produce validation reports for any excavation/fill exercises to be submitted to the ODA Planning Decisions Team in order to achieve planning discharge.
- Marker Layer and Human Health Separation Layer soils should be placed / replaced as part of these works in accordance with Site Remediation Strategies and Specifications. Please ensure that installed Marker Layer ties-in with Marker Layer levels of adjacent areas.
- Any arisings should be stored in a manner that prevents contamination of any remediated Made Ground or Human Health Separation Layer (HHSL) soils and so that materials can be managed to optimise their re-use off-site and subsequent processing (or where necessary treatment). **Any excavated wastes must not be utilised for backfilling unless appropriate Waste Exemptions or other arrangements are in place with the Environment Agency.**
- Any material suspected to contain contamination should be segregated and the PTP Team should be informed. If additional remedial excavations/works are deemed necessary, the requirements of Planning Condition OD.0.38 (unexpected contamination) may apply.
- Excavations/piling activities that penetrate the alluvium may create a pathway which allows any perched water within the made ground to contaminate the minor aquifer in the river terrace deposits. You should therefore consider this risk and if appropriate install measures to ensure that no contamination occurs and that you are able to validate the site once works are complete. This should involve prior consultation with the Remediation Designers for CZ2a and / or PDT.
- NBHCZ2a-112, NBHCZ2a-124, NBHCZ2a-138 and NBHCZ2a-605 are in the proximity of your works. Please ensure these wells are protected and retained.
- As agreed with Park Operations, underground obstructions (including piles, drainage and ducts) shall be removed to 2m below final ground level following removal of the temporary structure.
- Please ensure that appropriate records of the works are maintained in order to allow you to complete the following Section C of this document upon completion of the works (including records of Marker Layer and Separation Layer reinstatement, earthworks volumes, SMARTStart / M<sup>3</sup>n data entry, as-built records and frequency of validation sampling undertaken during the works).

**Distribution:** *Originating Team, Principal Contractor, CLM Project Manager, RemTech Team.*

**SECTION C** *(Please complete and return to [permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com) on completion of the works)*

Dear Sirs,

We confirm completion of works in accordance with the methods described in Section A and conditions described in Section B. On the basis of the following information and the attached supporting documents, we request that this application be formally closed.

Prepared by	██████████	Authorised by	██████████
of Company	ISG	of Company (PC)	ISG
Date	25/06/12	Date	05/07/12

C1: COVER LAYER	Reinstated	Altered	Omitted
Marker Layer	Yes	No	No
Human Health Separation Layer	Yes	No	No

Comments or description of cover system reinstatement	New Marker layer placed at bottom and sides of foundation
---	---

Photo record of excavation and Marker Layer reinstatement	See attached photograph record document)
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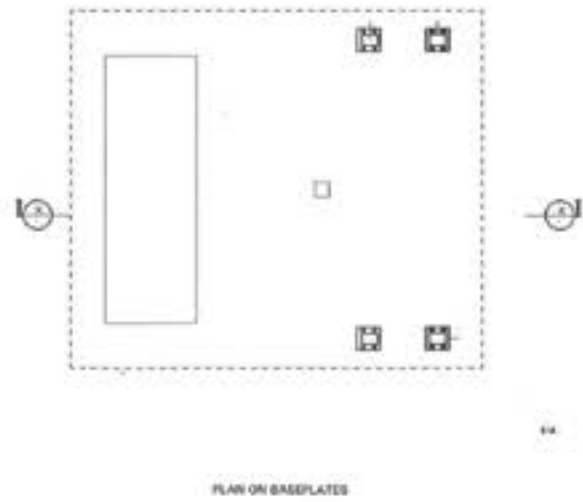
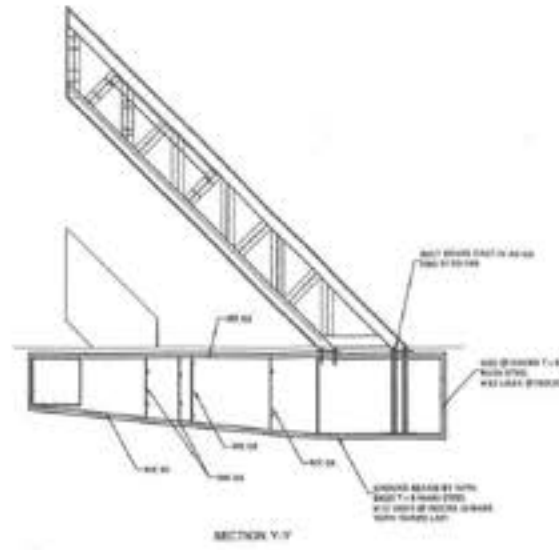
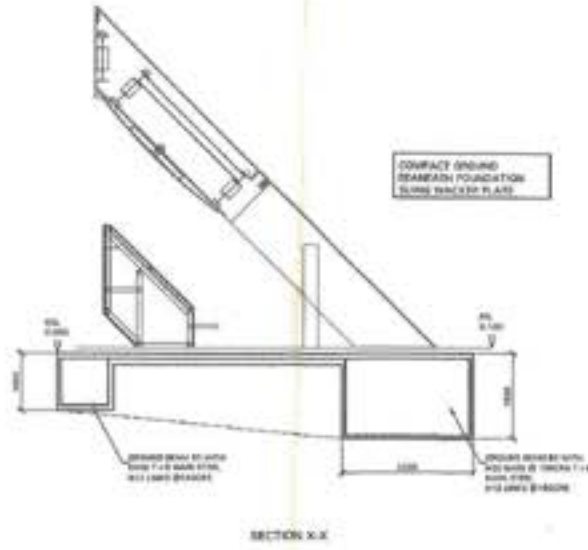
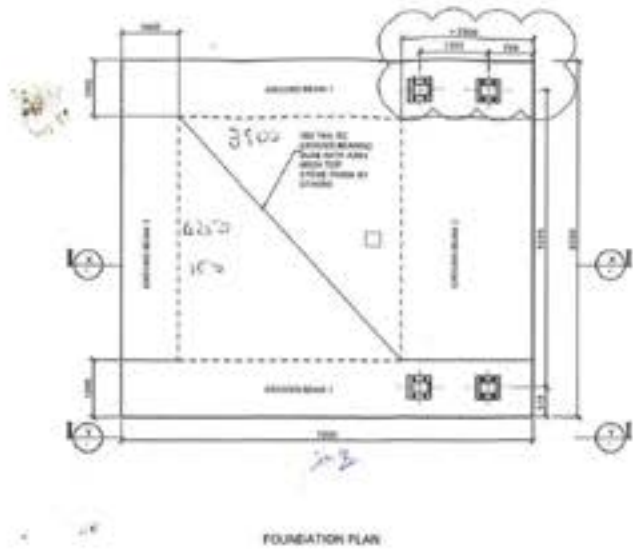
As-Built drawings provided	See attached as-built drawings
----------------------------	--------------------------------

C2: EXCAVATED VOLUMES	Above Marker Layer (m <sup>3</sup> )	Below Marker Layer (m <sup>3</sup> )
Total cut	26	22
Cut volume retained (on site)	0	0
Cut volume to Soil Hospital	0	0
Cut volume sent off Olympic Park	26	22

**ASSAI: 6050-STA-ATP-N-PTP-0012**

Related ATK-088 Export Application(s):	Not used for LOCOG works			
SMARTWaste References	Not used for LOCOG works			
<b>C3: FILL VOLUMES</b>	<b>Above Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>	<b>Below Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>
Total fill	0	N/A	0	N/A
Site won fill (reused)	0	N/A	0	N/A
Fill from Soil Hospital	0	N/A	0	N/A
Fill from outside Olympic Park	0	N/A	0	N/A
Related ATK-088 Import Application(s):	Not used for LOCOG works			
<b>Additional Comments:</b> Excavated hole filled with concrete. All excavated material sent off of park for disposal.				
<b>SECTION D</b> <i>(Application is closed by the Permit to Proceed Team following review of Section C and returned to FOP Team)</i>				
Prepared by	██████████	Authorised by	██████████	
of Company	Atkins	of Company	Atkins	
Date	09/07/2012	Date	09/07/2012	
Accepted & Closed	Yes			
Comments or conditions on closure / reason for non-closure of application:				
<b>Distribution:</b> <i>Originating Team, Principal Contractor, CLM Project Manager, RemTech Team, EW Project Manager.</i>				





NOTES:  
 THIS IS A TEMPORARY STRUCTURE  
 CONSTRUCTION SHALL BE  
 ACCORDING TO THE SPECIFICATIONS  
 AND APPROVALS

3-9  
 x4-250

NOTES: 1. SEE DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.	<table border="1"> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>										BP WTP ACTIVATION CFE016	BP SCULPTURE FOUNDATION WORKS	SHEET BASIC INFORMATION SHEET NO. _____ TOTAL SHEETS _____ DATE _____ PROJECT NO. _____ DRAWING NO. _____ SCALE _____ PROJECT LOCATION _____ PROJECT NO. _____ PROJECT NAME _____ PROJECT ADDRESS _____ PROJECT PHONE _____ PROJECT FAX _____ PROJECT EMAIL _____ PROJECT WEBSITE _____
CONSTRUCTION	DATE: APR 2008 5130 / R-100	C3											

# ATK-084 Permit to Proceed Progress Photographs



0063\_ISGL\_PRW\_0012



Excavated material ready for disposal off site



Concrete filled entire excavation no need for backfilling



Foundation used for BP walk in the Park structure



# Olympic Park Remediation Strategy

## Tool Box Talk

### **History**

The land within the Olympic Park has had many previous uses and had been heavily contaminated by industrial activity. As part of the enabling works over 2 million tonnes of soil were excavated and cleaned. A remediation strategy was also put in place to protect workers and future users of the Olympic Park from any remaining ground contamination.

### **Marker Layer**

A marker layer of orange fabric material was laid across most of the park to warn of contaminated material below.

### **Human Health Layer**

A layer of at least 600mm of clean crushed limestone (Type 1) was then laid on top of the Marker Layer to protect people from the contaminated soil below. This is known as the Human Health Layer.

### **Permit to Proceed (ATK-084)**

When we carry out new excavations we must be careful that we replace the Marker Layer and Human Health Layer to protect people in the future.

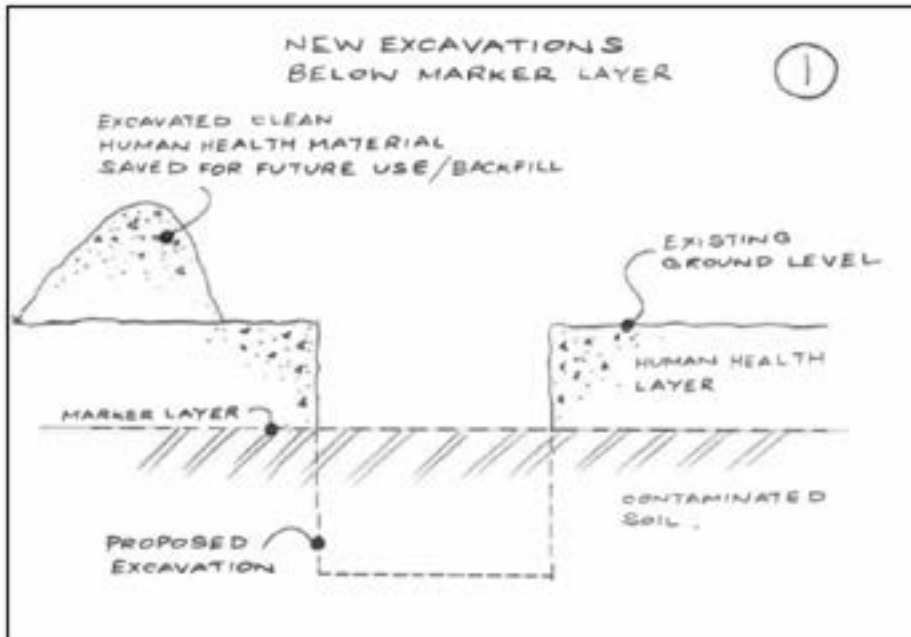
Olympic Park has placed a Permit to Proceed (ATK-084) system in place to monitor and control all excavation works. An ATK-084 must be issued and approved before any excavations can commence.

ISG will manage the issuing of ATK-084 permits but will need the following information at least one week before excavations can commence:

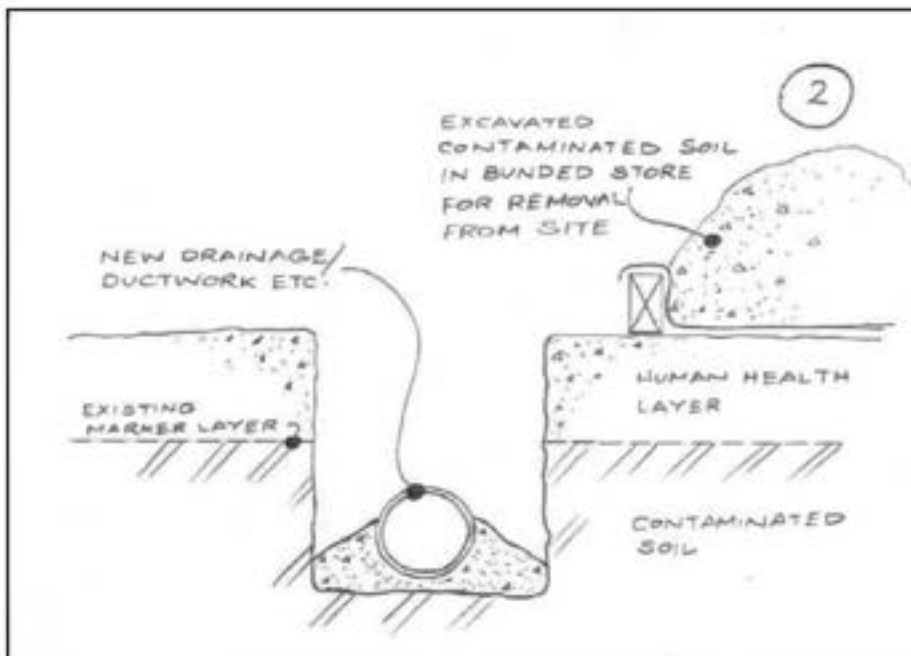
- Programme dates of the works
- Drawing showing the extent of the excavations
- Quantities of estimated excavated material for both above and below the Marker Layer (m3)
- Approved Method Statement for the works including how the Marker Layer and Human Health Layer will be reinstated.

### Works on Site

1) Clean material above the marker layer must be excavated and carefully segregated and stockpiled on site in a dedicated fenced off storage area to ensure that it can not be contaminated by other materials or pollutants for future reuse and backfilling. It should be stored well away from drains and watercourses.



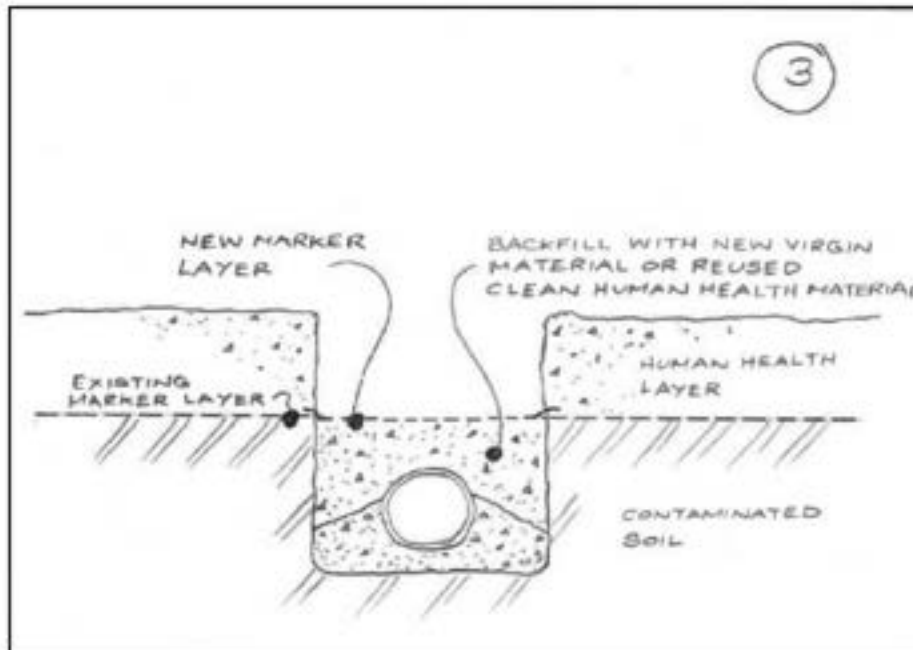
2) If excavations extend below the marker layer, full PPE will be required as the soils could be contaminated. Excavated soil must be placed on polythene sheeting in a bunded area, well away from drains or water courses. This material cannot be used for backfilling and must be tested and removed from the Olympic Park to an approved and licensed destination.



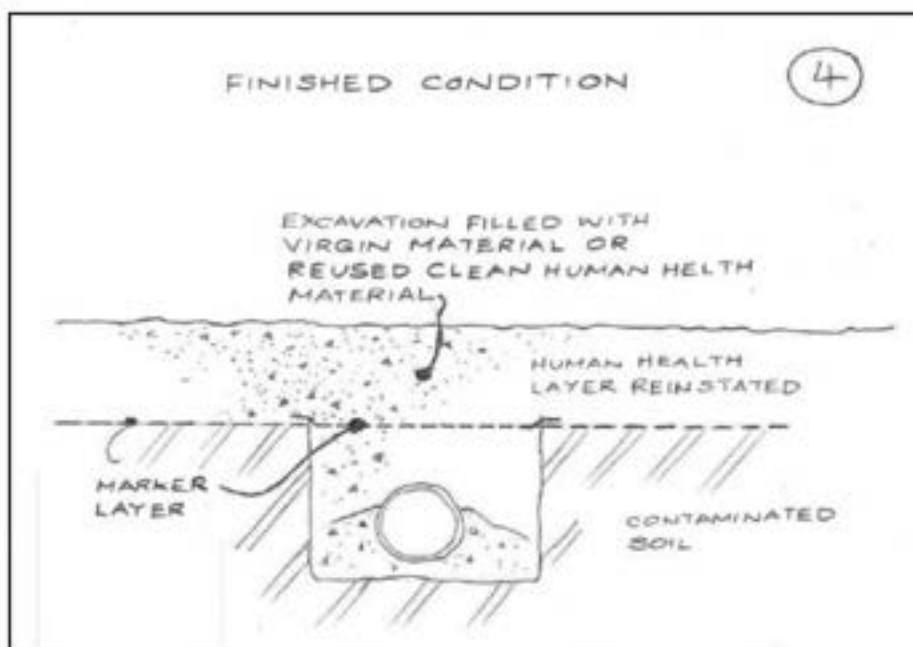


3) Once the new drainage or ducts etc. have been installed the excavation can be backfilled up to the existing Marker Layer level using new virgin materials or the saved clean Human Health material which has been stockpiled.

New Marker Layer membrane must then be installed at the same level as the existing and lapped where possible.



4) Only new clean virgin material or the saved Human Health Layer material can be used for backfill to reform the Human Health Layer. Excavated material from below the Marker Layer must never be used for backfilling as it may be contaminated.



**B2-2: Utility connections  
(0063\_ISGL\_PRW\_0011)**



London 2012 Olympic Park		PERMIT TO PROCEED	
<b>PROTECTION OF REMEDIATION WORKS: FORM ATK-084</b>			
PTP Reference: 0063_ISGL_PRW_0011			
Dear Sirs, With respect to the protection and maintenance of previously completed ground remediation works and site specific remediation strategies we hereby submit this Permit to Proceed application for our intrusive works and for your acceptance. We understand we initially require your completed section B <u>prior to commencement</u> of our works and that <u>we are responsible for the integrity of the remediation works.</u>			
<b>SECTION A</b> (Please complete & submit to <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> 5 days prior to works)			
Prepared by	██████████	Authorised by	██████████
of Company	ISG	of Company	ISG
Date	08.05.12	Date	08.05.12
Follow on Project	N/A	Principal Contractor	ISG
Title of Works	CDM Zone 2 Utilities connections	FOP Doc Reference	(if different from PTP reference)
Construction Zone	CZ2	Works Start Date	14.05.12
LA Site Reference	LA12490, LA7930-8 & 9, LA11280	Works Finish Date	15.07.12
Co-ordinates of works	G3726-G3728, G3766-G3768, G3808-G3810, G3849-G3852, G4114-G4119, G4151-G4156, G4188-G4193, G4225-G4229, G4264-G4267		
Drawing Reference	ATK-U-O-XX-02-CDM-SP-00-6100, 6101, 6102 & 6103		
Description of works	McNicholas works for utilities connection ducts		
Dimension of works (incl. depth)	63m length at 800 mm nominal depth		
Method Statement Reference(s)	McNicholas Multi Utilities MS 002		
Piling Risk Assessment Ref.	N/A		
Existing Marker layer depth	Approx 600 mm		
Earthworks above marker layer (m <sup>3</sup> )	38		
Earthworks below marker layer (m <sup>3</sup> )	13		
Historic boreholes at vicinity of works	N/A		
Planned backfill material types	Reuse of existing human health material and new imported fill if required		
Additional Comments:			
<b>SECTION B</b> (Completed by and returned from Permit to Proceed Team prior to works)			
Prepared by	██████████	Authorised by	██████████
of Company	Atkins	of Company	Atkins
Date	15/05/2012	Date	15/05/2012
Accepted	Yes		
Conditions of acceptance / reason for non-acceptance:			
<ul style="list-style-type: none"> <li>All permanent backfill materials shall be compliant with the CZ2a Site Specific Remediation Specifications and shall maintain the integrity of ground layers in accordance with CZ2a Site Specific Remediation Strategies. For imported materials, contractors are also required to comply with: Facilities and their Legacy Transformation Planning Application, No. 07/90010/OUMODA, Condition OD.0.39 'Quality of Imported Fill' via liaison with the ODA Planning Decisions Team.</li> <li>Contractors are required to produce validation reports for any excavation/fill exercises to be submitted to the ODA Planning Decisions Team in order to achieve planning discharge.</li> </ul>			

- Marker Layer and Human Health Separation Layer soils should be placed / replaced as part of these works in accordance with Site Remediation Strategies and Specifications. Please ensure that installed Marker Layer ties-in with Marker Layer levels of adjacent areas.
- Any arisings should be stored in a manner that prevents contamination of any remediated Made Ground or Human Health Separation Layer (HHSL) soils and so that materials can be managed to optimise their re-use off-site and subsequent processing (or where necessary treatment). **Any excavated wastes must not be utilised for backfilling unless appropriate Waste Exemptions or other arrangements are in place with the Environment Agency.**
- Any material suspected to contain contamination should be segregated and the PTP Team should be informed. If additional remedial excavations/works are deemed necessary, the requirements of Planning Condition OD.0.38 (unexpected contamination) may apply.
- Excavations/piling activities that penetrate the alluvium may create a pathway which allows any perched water within the made ground to contaminate the minor aquifer in the river terrace deposits. You should therefore consider this risk and if appropriate install measures to ensure that no contamination occurs and that you are able to validate the site once works are complete. This should involve prior consultation with the Remediation Designers for CZ2a and / or PDT.
- NBHCZ2a-112, NBHCZ2a-124, NBHCZ2a-138 and NBHCZ2a-605 are in the proximity of your works. Please ensure these wells are protected and retained.
- As agreed with Park Operations, underground obstructions (including piles, drainage and ducts) shall be removed to 2m below final ground level following removal of the temporary structure.
- Please ensure that appropriate records of the works are maintained in order to allow you to complete the following Section C of this document upon completion of the works (including records of Marker Layer and Separation Layer reinstatement, earthworks volumes, SMARTStart / M<sup>3</sup>n data entry, as-built records and frequency of validation sampling undertaken during the works).

**Distribution:** *Originating Team, Principal Contractor, CLM Project Manager, RemTech Team.*

**SECTION C** *(Please complete and return to [permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com) on completion of the works)*

Dear Sirs,

We confirm completion of works in accordance with the methods described in Section A and conditions described in Section B. On the basis of the following information and the attached supporting documents, we request that this application be formally closed.

Prepared by	██████████	Authorised by	██████████
of Company	ISG	of Company (PC)	ISG
Date	25/06/12	Date	05/07/12
<b>C1: COVER LAYER</b>	<b>Reinstated</b>	<b>Altered</b>	<b>Omitted</b>
Marker Layer	Yes	No	No
Human Health Separation Layer	Yes	No	No
Comments or description of cover system reinstatement	Clean existing Human Health Layer was saved and reused for backfilling for below and above marker layer.		
Photo record of excavation and Marker Layer reinstatement	See attached photographic record		
As-Built drawings provided	See attached as built drawings		
<b>C2: EXCAVATED VOLUMES</b>	<b>Above Marker Layer (m<sup>3</sup>)</b>	<b>Below Marker Layer (m<sup>3</sup>)</b>	
Total cut	46	16	
Cut volume retained (on site)	46	0	
Cut volume to Soil Hospital	0	0	
Cut volume sent off Olympic Park	0	16	
Related ATK-088 Export Application(s):	Not used on LOCOG works		
SMARTWaste References	Not used on LOCOG works		



**ASSAI: 6050-STA-ATP-N-PTP-0011**

<b>C3: FILL VOLUMES</b>	<b>Above Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>	<b>Below Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>
Total fill	28	N/A	9	N/A
Site won fill (reused)	28	N/A	9	N/A
Fill from Soil Hospital	0	N/A	0	N/A
Fill from outside Olympic Park	0	N/A	0	N/A
Related ATK-088 Import Application(s):	Not used on LOCOG projects			
<b>Additional Comments:</b> Clean existing Human Health Layer was saved and reused for backfilling for below and above marker layer				
<b>SECTION D</b> <i>(Application is closed by the Permit to Proceed Team following review of Section C and returned to FOP Team)</i>				
Prepared by	██████████	Authorised by	██████████	
of Company	Atkins	of Company	Atkins	
Date	09/07/2012	Date	09/07/2012	
Accepted & Closed	Accepted & Closed			
<b>Comments or conditions on closure / reason for non-closure of application:</b> Permit approved noting earlier discussions between ISG and the Environment Agency confirming that the HHSL material referenced above is not classified as a waste product and no Waste Exemptions are required for its reuse.				
<b>Distribution:</b> <i>Originating Team, Principal Contractor, CLM Project Manager, RemTech Team, EW Project Manager.</i>				

# ATK-084 Permit to Proceed Progress Photographs



0063\_ISGL\_PRW\_0011



Excavation above marker layer



Excavations above marker layer



New ducts installed above Marker Layer



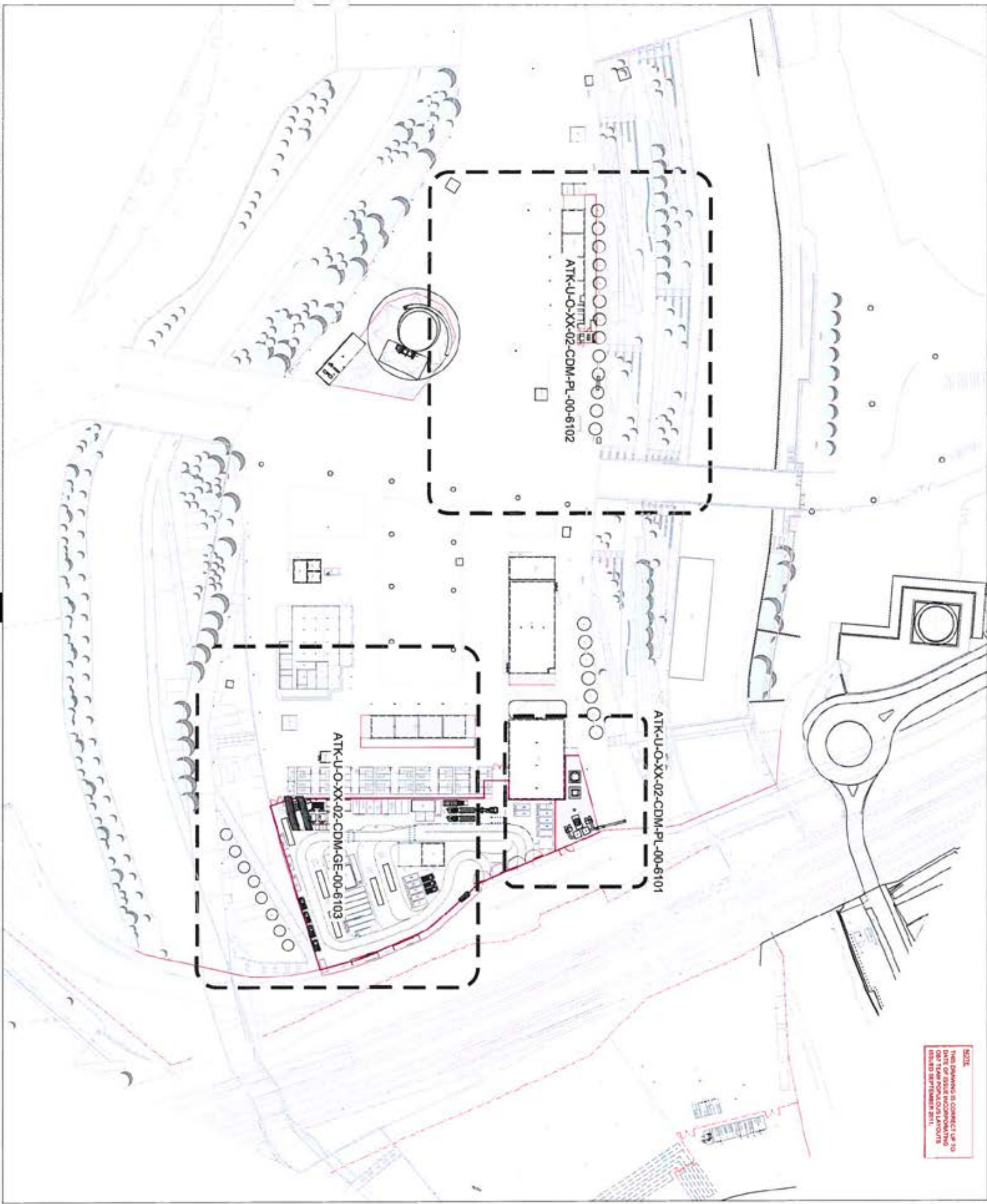
Reinstated marker layer when penetrated



Use of reused HHL material for backfilling



**NOTE**  
THIS DRAWING IS CONFIDENTIAL UP TO DATE OF ISSUE INCORPORATING OUR TEAM'S FINAL LAYOUTS ISSUED SEPTEMBER 2011.



London Organising Committee of the Olympic Games and Paralympic Games Ltd  
 Olympic Delivery Authority  
 2008 Olympic Stadium  
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- NOTES**
- SETTING OUT INFORMATION IS BASED ON THE CLIENT'S DATA. ENGINEERING DETAILS ARE TO BE PROVIDED BY THE CLIENT.
  - ATK-U-O-XX-02-CDM-PL-00-6102 TO BE PROVIDED BY THE CLIENT.
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EXTENT OF LOOOG SITE

DATE: 07.02.12  
 DRAWN BY: [REDACTED]  
 CHECKED BY: [REDACTED]

NO.	DESCRIPTION	DATE
1	ISSUED FOR APPROVAL	07.02.12
2	ISSUED FOR APPROVAL	07.02.12



**Common Domain**

Zone 2  
 Siteworks - Utilities  
 Site Plan

PROJECT NO: 5077022

DATE	SCALE	BY	CHECKED
07.02.12	1:750	A1	C00















# Olympic Park Remediation Strategy

## Tool Box Talk

### **History**

The land within the Olympic Park has had many previous uses and had been heavily contaminated by industrial activity. As part of the enabling works over 2 million tonnes of soil were excavated and cleaned. A remediation strategy was also put in place to protect workers and future users of the Olympic Park from any remaining ground contamination.

### **Marker Layer**

A marker layer of orange fabric material was laid across most of the park to warn of contaminated material below.

### **Human Health Layer**

A layer of at least 600mm of clean crushed limestone (Type 1) was then laid on top of the Marker Layer to protect people from the contaminated soil below. This is known as the Human Health Layer.

### **Permit to Proceed (ATK-084)**

When we carry out new excavations we must be careful that we replace the Marker Layer and Human Health Layer to protect people in the future.

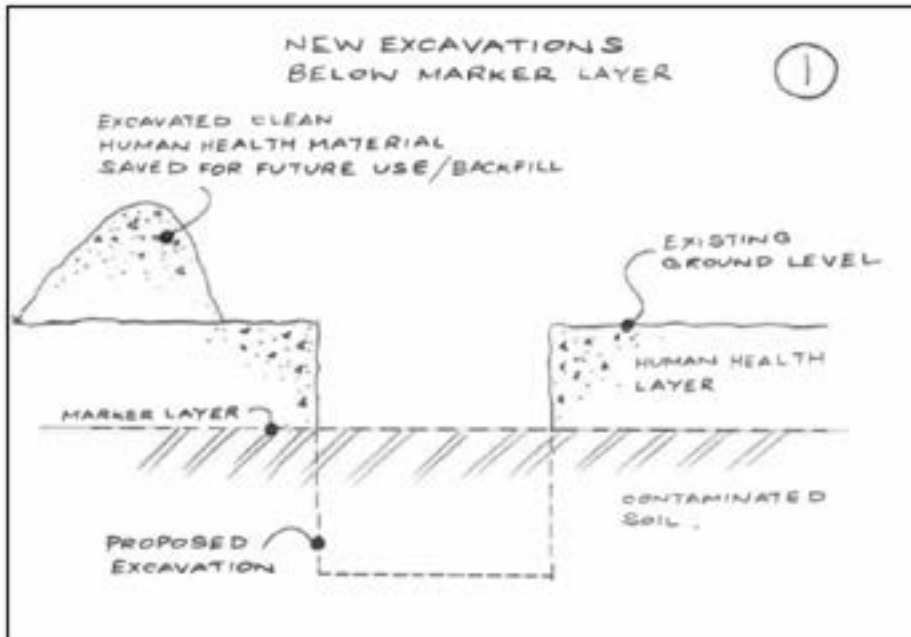
Olympic Park has placed a Permit to Proceed (ATK-084) system in place to monitor and control all excavation works. An ATK-084 must be issued and approved before any excavations can commence.

ISG will manage the issuing of ATK-084 permits but will need the following information at least one week before excavations can commence:

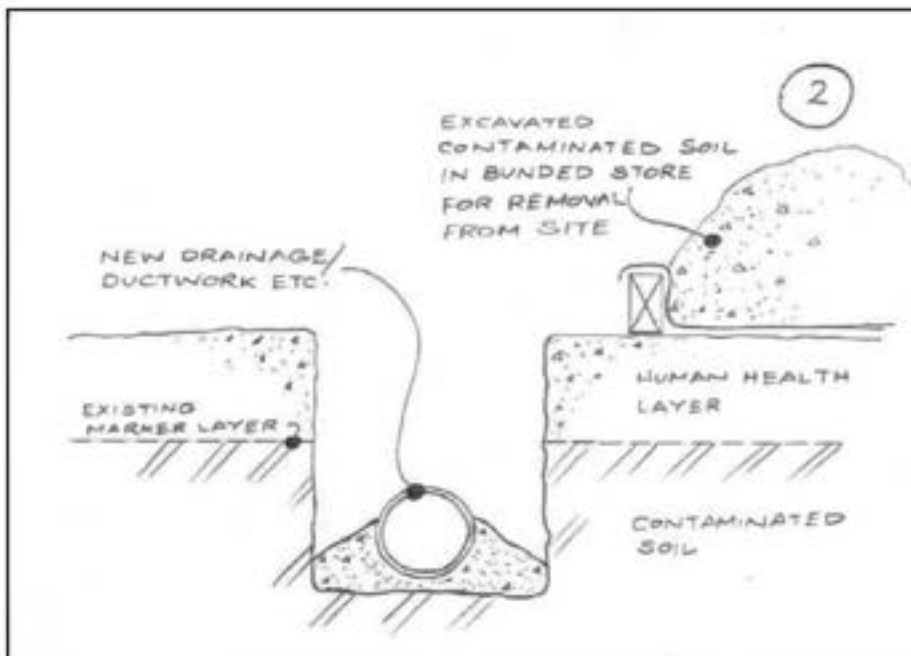
- Programme dates of the works
- Drawing showing the extent of the excavations
- Quantities of estimated excavated material for both above and below the Marker Layer (m3)
- Approved Method Statement for the works including how the Marker Layer and Human Health Layer will be reinstated.

### Works on Site

1) Clean material above the marker layer must be excavated and carefully segregated and stockpiled on site in a dedicated fenced off storage area to ensure that it can not be contaminated by other materials or pollutants for future reuse and backfilling. It should be stored well away from drains and watercourses.



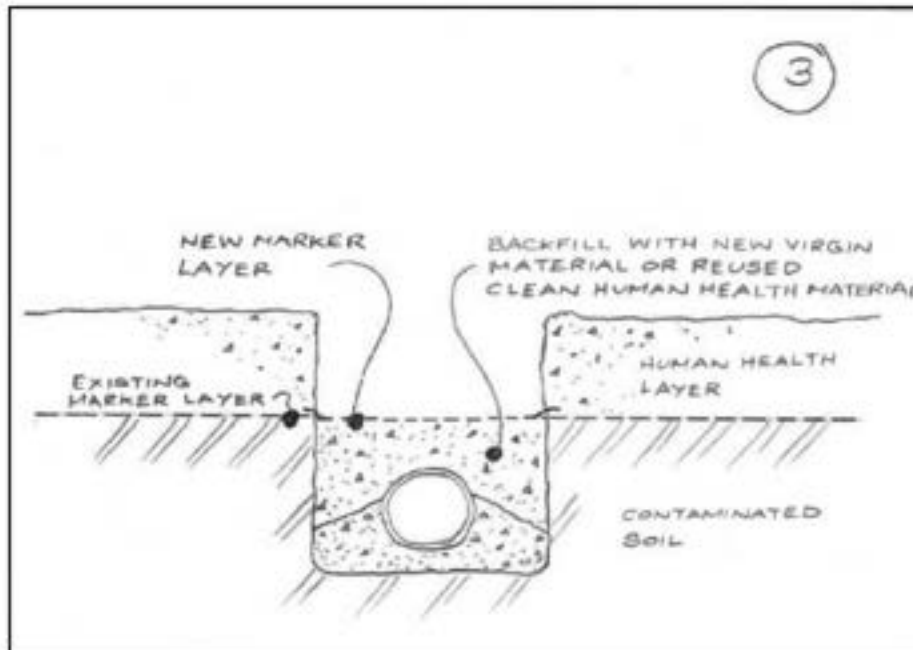
2) If excavations extend below the marker layer, full PPE will be required as the soils could be contaminated. Excavated soil must be placed on polythene sheeting in a bunded area, well away from drains or water courses. This material cannot be used for backfilling and must be tested and removed from the Olympic Park to an approved and licensed destination.



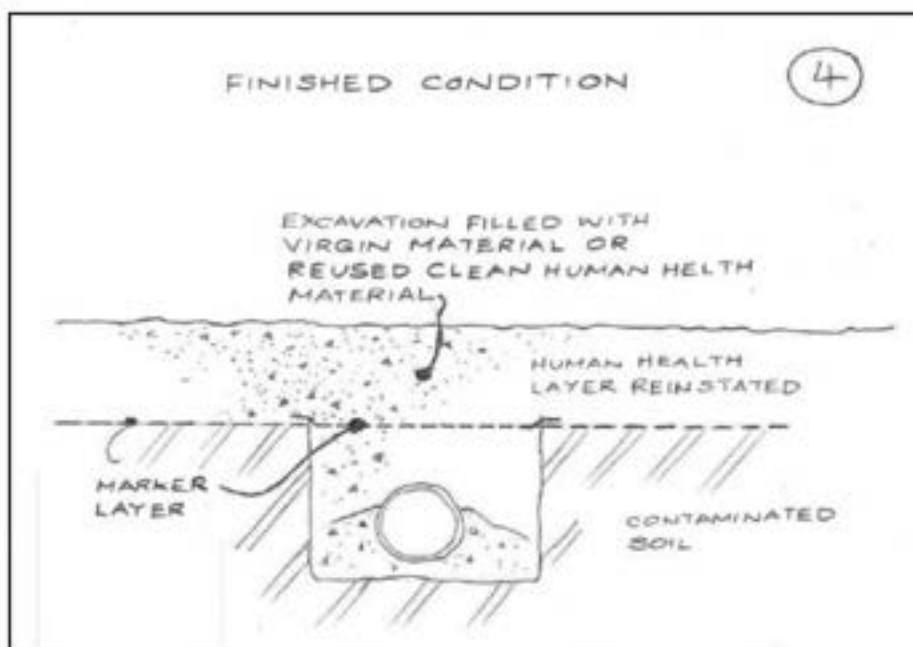


3) Once the new drainage or ducts etc. have been installed the excavation can be backfilled up to the existing Marker Layer level using new virgin materials or the saved clean Human Health material which has been stockpiled.

New Marker Layer membrane must then be installed at the same level as the existing and lapped where possible.



4) Only new clean virgin material or the saved Human Health Layer material can be used for backfill to reform the Human Health Layer. Excavated material from below the Marker Layer must never be used for backfilling as it may be contaminated.



**B2-3: Temporary Structures  
(0066\_LOC\_PRW\_0001)**



London 2012 Olympic Park		PERMIT TO PROCEED	
<b>PROTECTION OF REMEDIATION WORKS: FORM ATK-084</b>			
<b>PTP Reference: 0066_LOC_PRW_0001</b>			
Dear Sirs, With respect to the protection and maintenance of previously completed ground remediation works and site specific remediation strategies we hereby submit this Permit to Proceed application for our intrusive works and for your acceptance. We understand we initially require your completed section B <u>prior to commencement</u> of our works and that <u>we are responsible for the integrity of the remediation works</u> .			
<b>SECTION A</b> (Please complete & submit to <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> 5 days prior to works)			
Prepared by of Company	██████████ LOCOG	Authorised by of Company	██████████ LOCOG
Date	19 January 2012	Date	19 January 2012
Follow on Project	GL Events Tents	Principal Contractor	GL, TBC
Title of Works	Installation of GL Tents	FOP Doc Reference	0066_LOC_PRW_0001
Construction Zone	Site Wide	Works Start Date	January 2012
LA Site Reference	Various – Site wide	Works Finish Date	July 2012
Co-ordinates of works	Park Wide		
Drawing Reference	Upon request		
Description of works	Installation of GL Tents of various sizes across the park to provide FoH and BoH accommodation.		
Dimension of works (incl. depth)	3m x 3m, 5m x 5m garden tents use 600mm anchor pins - maximum ground penetration will be circa 550mm All gable tents with cassette floor fitted use 1000mm long anchor pins - maximum ground penetration will be circa 950mm All gable tents without cassette floor (mainly PSA's & VSA's) use 1200mm long anchor pins, so maximum ground penetration will be circa 1150mm		
Method Statement Reference(s)	LON2012 - Method Statement - Anchor Pins – 120124 LON2012 - Method Statement - Anchor Pins in tarmac – 120124 LON2012 - Method Statement - Small Square Structures – 111206 LON2012 - Method Statement - 10m Absolute Tent – 111206 LON2012 - Method Statement - 10m Neivalu Tent – 111208 LON2012 - Method Statement - 15m Absolute Tent – 111206 LON2012 - Method Statement - 20m Absolute Tent – 111206		
Piling Risk Assessment Ref.	n/a		
Existing Marker layer depth	Various		
Earthworks above marker layer (m <sup>3</sup> )			
Earthworks below marker layer (m <sup>3</sup> )			
Historic boreholes at vicinity of works			
Planned backfill material types			
Additional Comments: LOCOG also have dispensation by ODA to pin the tents which are outside the ZOI of 3rd party assets, or with prior permission from the 3rd party asset owners. We hereby confirm that the methods used will ensure minimal mixing of general fill/separation layer materials, and marker layer will not need to be replaced. GL Events have confirmed they have never encountered a situation where we have had to excavate to remove anchors, therefore the segregation materials and marker layer reinstatement is not applicable.			

**SECTION B** (Completed by and returned from Permit to Proceed Team prior to works)

Prepared by of Company	██████████ Atkins	Authorised by of Company	██████████ Atkins
Date	03/02/2012	Date	03/02/2012
Accepted	Yes		

## Conditions of acceptance / reason for non-acceptance:

- As detailed above and in previous discussions; the methodology for pin selection, installation and removal must ensure minimal mixing of above and below marker layer materials. This permit therefore applies only to the anchor pins detailed in the above method statements. Anchor pins which vary from this design (screw/grooved/notched) should be further assessed and presented to the PtP team and/or the Planning Decisions Team for review.
- In cases where pin removal causes disturbance to existing ground and raises potential for the mixing of materials in a localised area, the material around the pin site shall be excavated and replaced with compliant fill materials (as defined in the relevant Site Specific Remediation Strategy/Specification), supported by appropriate validation. Details of marker layer reinstatement including photographs to be included in Section C.
- Voids created following removal of anchor pins in hard standing shall be reinstated to prevent preferential pathways for surface water.
- In the unlikely event that pins require local excavation to assist in their removal, marker layer shall be appropriately reinstated and fill materials replaced with chemically and geotechnically suitable material.
- This permit does not replace the Park Operations ATP1 and ATP2 process. The contractor retains responsibility for ensuring pin locations are clear of all underground utilities or similar.

**Distribution:** Originating Team, Principal Contractor, CLM Project Manager, RemTech Team.

**SECTION C** (Please complete and return to [permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com) on completion of the works)

Dear Sirs,

We confirm completion of works in accordance with the methods described in Section A and conditions described in Section B. On the basis of the following information and the attached supporting documents, we request that this application be formally closed.

Prepared by of Company	Completed on behalf of LOCOG	Authorised by of Company (PC)	Completed on behalf of LOCOG
Date		Date	

C1: COVER LAYER	Reinstated	Altered	Omitted
Marker Layer	No	Yes / No	Yes / No
Human Health Separation Layer	No	Yes / No	Yes / No

Comments or description of cover system reinstatement: Not provided

Photo record of excavation and Marker Layer reinstatement: (Attach photograph record document)

As-Built drawings provided: (Attach as-built drawing or sketch indicating cover system reinstatement)

C2: EXCAVATED VOLUMES	Above Marker Layer (m <sup>3</sup> )	Below Marker Layer (m <sup>3</sup> )
Total cut	0	0
Cut volume retained (on site)		
Cut volume to Soil Hospital		
Cut volume sent off Olympic Park		

Related ATK-088 Export Application(s):

SMARTWaste References: (Attach spreadsheet from SMARTStart detailing relevant entries)



<b>C3: FILL VOLUMES</b>	<b>Above Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>	<b>Below Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>
Total fill	0		0	
Site won fill (reused)				
Fill from Soil Hospital				
Fill from outside Olympic Park				
Related ATK-088 Import Application(s):				
Additional Comments:				
<b>SECTION D</b> <i>(Application is closed by the Permit to Proceed Team following review of Section C and returned to FOP Team)</i>				
Prepared by	██████████	Authorised by	██████████	
of Company	Atkins	of Company	Atkins	
Date	26/11/2012	Date	26/11/2012	
Accepted & Closed	Yes / No			
Comments or conditions on closure / reason for non-closure of application: Permit closed following discussions with the Principal Contractor who confirmed that works were completed as per the agreed method statement and all lightning rods have since been removed. No information has been provided by the contractor regarding the filling of the small diameter voids in the hard standing. If not already addressed, these will be removed during Transformation Phase development in this area.				
<b>Distribution:</b> <i>Originating Team, Principal Contractor, CLM Project Manager, RemTech Team, EW Project Manager.</i>				

**APPENDIX C:**  
**Permit to Proceed Protocol (CD only)**





# The Permit to Proceed Protocol: Protection of Remediation Works on the Olympic Park

## Notice

This report was produced by Atkins Limited for the Olympic Delivery Authority for the specific purpose of the PTP works on the Olympic Park.

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## Document History

ATKINS JOB NUMBER: 5051803.400 ATKINS DOCUMENT REF: WIZZZ/000/02/03/0293			DOCUMENT REF: PRO-ATK-CM-ZZZ-ZZZ-ZZZ-E-0003 (Formerly PRO-ATK-CM-03a-STA-SP1-Z-0001)			
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date
10	Division of Permit to Proceed & Soil Hospital Documents	■	■	■	■	01/07/09
09	For Implementation	■	■	■	■	30/01/09
08	For Implementation	■	■	■	■	15/08/08
07	For Implementation	■	■	■	■	11/08/08
06	For Implementation	■		■	■	11/07/08
05	For Implementation	■		■	■	06/06/08
04	For Implementation	■		■	■	14/02/08
03	For Issue			■	■	07/01/08
02	For Information	■				
01	For Information	■				



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## Appendices

APPENDIX A: Summary of Follow on Project Obligations Covered Under the Permit to Proceed Protocol

APPENDIX B: Permit to Proceed Process Diagram





# Definitions

**CLM** – The Employers Delivery Partner

**Employer** – The Olympic Delivery Authority (ODA) located at 23<sup>rd</sup> Floor, 1, Churchill Place, Canary Wharf, London, E14 5LN, and includes transferees, successors and assignees.

**Enabling Works** – The site clearance, demolition, bulk earthworks and Remediation Works carried out by the Enabling Works Tier 1 Contractors to prepare the Olympic Park platform for construction by Follow on Projects.

**Enabling Works Formation Level (EWFL)** – The site surface level that is handed over to the Follow on Projects by the Enabling Works Tier 1 Contractors.

**Enabling Works Sub-Formation Level (EWSFL)** – The level beneath the EWFL upon which the Marker Layer is placed.

**Enabling Works Tier 1 Contractors** – The contractors appointed to a Framework Contract to undertake Demolition, Remediation and Enabling Works. They are BAM Nuttall Ltd (BNL) who have responsibility under the Enabling Works contract to provide the works to the southern area of the site (Construction Zones (CZ) 1, 2, 3, 4 and 8; Planning Delivery Zones (PDZ) 12, 13 and 14) and Morrison Construction Ltd (MCL) who have responsibility to provide the works to the northern area of the site (CZ 5, 6 and 7; PDZ 15).

**Exported Material** – Materials excavated and removed from Follow on Project sites.

**Final Finished Level (FFL)** – Final ground levels or constructed floor levels under a building, upon completion of works by Follow on Projects.

**Final Build Layer** – Term referenced in Planning Conditions for the Olympic Park, meaning soil or other material placed to complete the remediation and, with the exception of topsoil, to be at the finished ground levels.

**Follow on Projects (FOP)** – Any project involving contractors employed by the Employer to construct infrastructure and venue works on the Olympic Park following completion of Enabling Works by the Tier 1 Contractors.

**Human Health Separation Layer (HHSL) (or Separation Layer)** – Chemically and geotechnically acceptable fill material which satisfies Human Health and Controlled Waters Site Acceptance Criteria (SSAC/SSRT), which lies above the Marker Layer but beneath the final ground cover.

**Imported Material** – Infill materials brought into FOP from within or from outside the Olympic Park. All permanent fill materials placed within the Park must be compliant with the site specific remediation criteria as established in the Baseline Remediation Strategy and associated Site Specific Remedial Strategies and Specifications.

**Marker Layer** – An orange non woven geo-textile membrane (or similar) placed directly beneath the Separation Layer to clearly delineate the separation layer from potentially contaminated materials below.

**Permit to Proceed (PTP) Team** – The Team responsible for implementation and administration of the protection of remediation works by Follow on Projects. The PTP Team are provided by Atkins and from June 2009 will operate under CLM Project Assurance. The management of the supply and receipt of earthworks materials to and from Follow on Projects will be handled by the separate Soil Hospital Team.

**Remediation Technical (RemTech) Team** – The Team responsible for residual Enabling Works and established to offer technical advice to Follow on Projects on remediation issues.

**Sharepoint** – A web-based shared workspace (<https://sharepoint.demrem.com>) which hosts data regarding chemical and geotechnical laboratory test results of materials supplied by Tier 1 Contractors. Its aim is to provide direct access for the FOP to data needed in the validation process of the infill material sourced from Tier 1 contractors.

**SMARTStart** – A computer system available from BRE, which provides a Site Waste Management Plan (SWMP) tool to aid the construction industry in meeting legislation and as an aid to improving waste management ([www.smartwaste.co.uk](http://www.smartwaste.co.uk)). This is designed to monitor and track all materials used and / or



generated within a construction site, supporting the requirements of clients and contractors under duty of care.

**Soil Hospital Team** – Part of the former PTP Team responsible for the administration and management of 'Request from Contractor' applications from Follow on Project Teams for the import and export of earthworks materials to and from those projects. The Soil Hospital Team will also retain the responsibility to coordinate the resolution borehole conflicts where construction works conflict with borehole installations across the Olympic Park.





# 1. Introduction

## 1.1 Permit to Proceed: The Protection of Remediation Works

The Employer has established this Permit to Proceed (PTP) Protocol, which shall be adopted by all Follow on Project (FOP) Teams, to regulate any disruption, modification or penetration of ground surfaces and to protect the overall integrity of site remediation works across the Olympic Park.

From June 2009 the PTP Team will form part of CLM Assurance. Implementation of this PTP Protocol is designed to protect existing remediation works and maintain environmental protection measures.

The PTP Team will administer this Protocol via 'Protection of Remediation Works (ATK-084)' applications that will be submitted by FOP Teams for all elements of their works that penetrate previously remediated ground surfaces. ATK-084 applications shall be submitted to [permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com).

## 1.2 Soil Hospital: Management of Olympic Park Earthworks Material

To facilitate the supply and receipt of earthworks materials between FOP and soil treatment facilities within the Olympic Park, FOP Teams will submit 'Request from Contractor (ATK-088)' applications to the Soil Hospital Team. ATK-088 applications shall be submitted to [soil.hospital@demrem.com](mailto:soil.hospital@demrem.com).

The function of the Soil Hospital Team is described in the separate document:

**The Soil Hospital Protocol: Management of Olympic Park Earthworks Materials.** (Document Ref: PRO-ATK-CM-ZZZ-ZZZ-ZZZ-E-0005)

## 1.3 Soil Hospital: Resolution of Borehole Installation Conflicts

Monitoring wells and other borehole installations are located across the Olympic Park. Many of the installations must remain intact and accessible in order to verify that remediation objectives have been met or to allow ongoing groundwater remediation works.

Matters relating to the management of boreholes that conflict with construction works are detailed in the Soil Hospital Protocol (referenced above).

## 1.4 Compliance Auditing

The PTP Team will audit FOP works to ensure they conform to authorised site remediation strategies and Planning Conditions. Members of the PTP and Soil Hospital Teams shall be allowed access to FOP sites to inspect and audit construction works for compliance against this PTP Protocol; the Soil Hospital Protocol and any relevant permits issued under either protocol.

An audit report will be issued to the FOP Team, their CLM Project Manager and CLM Assurance detailing performance and any key issues identified in the audit.

## 1.5 Non-Conformance Reports

Where the FOP Team fails to conduct works in accordance with this PTP Protocol, or if in the view of the PTP Team any works or actions pose a potential risk to the integrity of previous (or ongoing groundwater) remediation works, a Non-Conformance Report will be raised by the PTP Team and issued through CLM Assurance.

Non-conformance reports will be issued to the FOP Team and their CLM Project Manager and will be reported to the CLM Executive in monthly Performance Assurance Reports.



## 2. Olympic Park Remediation Information

### 2.1 Site Remediation Background

It is the responsibility of the FOP Team to ensure they are familiar with all relevant aspects of completed or ongoing site remediation works and construction activities; such that they may ensure their works do not damage or otherwise negate any preceding site remediation works.

A general summary of remediation works completed at the Olympic Park to date is provided below. These descriptions are not exhaustive and are provided for introductory purposes only. Exact details of completed or ongoing remediation works for specific parts of the site are detailed in site handover documentation and will be referenced on the CLM Sharepoint website (<https://sp.h0twise.com>) within the 'Programme Delivery Management System' (PDMS).

Completed site remediation works have involved or included:

- Removal and treatment of soils below the Enabling Works Formation Level (EWFL) that contained concentrations of contaminants above acceptance criteria defined within Site Specific Remediation Specifications (SSRSpec) and which presented a risk to controlled waters and/or human health receptors in either Olympic or Legacy land use phases of the Olympic Park.
- Provision of a remediated ground cover system incorporating:
  - a Marker Layer (ML), in most cases placed 600-800mm below the Final Finished Level (FFL) and typically consisting of orange geotextile 'Terram 1000' on horizontal surfaces and 'Signal' geogrid type marker layer on slopes steeper than 1(V):3(H).
  - Human Health Separation Layer (HHSL) of soil or aggregate placed in a thickness of (typically) 300mm over the Marker Layer.
- Treatment of excavated soils to render them suitable for reuse, predominantly as General and Structural Fill beneath the Marker Layer.
- Treatment of contaminated groundwater via both pump & treat systems and/or in-situ remediation
- Groundwater interception and pathway control via construction of below ground barriers and/or installation of pumping systems.
- In geotechnical terms, materials have been placed using Method Compaction or End Product Compaction (95% of maximum dry density) as appropriate. California Bearing Ratio (CBR) tests (one test per 1,000m<sup>2</sup>) have been carried out on the Enabling Works Sub-Formation level (EWSFL) and EWFL to ensure a minimum CBR of 5% on Class 1 and Class 6a (granular fills) and a minimum CBR of 2% on Class 2 materials (cohesive fills).
- Remediation works to address post-construction risks to controlled waters and human health. These works do not, and will not, address potential risks to any FOP Team workforce arising from exposure to soils, groundwater, ground gases or vapours below the site. **The Olympic Park remains a "brownfield site"**. In accordance with legislation, the FOP Team must appropriately assess, control and mitigate potential risks to worker health and safety.

### 2.2 Reference Documents and Information Sources

It is the responsibility of FOP Teams to be familiar with all applicable planning conditions and relevant site remediation specifications prior to commencing any ground works. These documents will be included or referenced within site handover documentation and on the CLM Sharepoint website (<https://sp.h0twise.com>) within the PDMS.

The following list of generic specification and planning documents is not exhaustive and it remains the responsibility of FOP Teams to be aware of all documents applicable to their works. The PTP Team may audit any aspect of FOP works against any applicable site remediation specifications or planning conditions (which relate to the protection and maintenance of site remediation works).





## 2.2.1 Remediation Design Documents

### 1. (Typical) Site Specific Remediation Documents

Site specific remediation and earthworks design documents remain applicable to FOP construction works and present (chemical) soil acceptance criteria and details of how remediated ground cover systems (ML and HHSL) must be constructed within site formation levels:

- Site Specific Remediation Strategy (SSRS)
- Site Specific Remediation Specification (SSRSpec)
- Remediation Method Statement
- Site Validation Reports (where available)

### 2. Park-wide Remediation Documents

Where site specific remediation design documents do not apply, global site remediation documents and specifications will normally be adopted:

- Global Remediation Strategy
- Global Groundwater Monitoring Strategy

### 3. Amendments to Remediation Specifications

Agreed alterations or updates to site specific remediation specifications may be introduced via submissions approved by the Planning Decisions Team. Any such amendments made by prior contractors / occupiers of the site will be provided in supplementary handover documentation and will be referenced on the PDMS.

## 2.2.2 Olympic Park Planning Permissions

Approved planning permissions for the development of the Olympic Park can be viewed at the ODA website (<http://www.london2012.com/planning/>). The park-wide permissions include:

- Olympic, Paralympic and Legacy Transformation Planning Applications: Site Preparation Planning Application
- Olympic, Paralympic and Legacy Transformation Planning Applications: Facilities and their Legacy Transformation Planning Application

## 2.2.3 Further Standards and Guidance Documents

The following documents include additional design requirements and obligations that FOP Teams must implement with respect to various site construction works:

- The Soil Hospital Protocol: Management of Olympic Park Earthworks Materials
- The Code of Construction Practice
- Intrusive Investigation Method Statement
- EA Guide to Contractors on the Olympic Park
- Environmental Protection Requirements for Piling (REP-ATK-CG-ZZZ-ZZZ-ZZZ-Z-0001)
- Soil Gas and Vapour Risks: A Briefing Note to Designers (REP-ATK-CM-ZZZ-OLP-ZZZ-Z-0001)
- Environmental Permit No. EAWML80790 (South Park Waste Management License)
- Environmental Permit No. EAWML80791 (North Park Waste Management License)
- Construction Waste Management Plan (CLM-D0701-Rep-CWMP-v1.6.doc)
- Memorandum of Understanding for Waste Management Licensing Applied to the Olympic Park (Appended to CWMP)
- A Guide to Material Movements: London 2012 Enabling Works (GUI-MOR-CE-ZZZ-ZZZ-XXX-E-0015)

# 3. The Protection of Remediation Works

## 3.1 Introduction

As a minimum, FOP Teams are responsible for the following matters, against which they will be audited:

- Works must comply with site remediation design specifications.
- Works shall not invalidate any previously completed site remediation works.
- Protection, reinstatement or installation (completion) of remediated ground cover systems as necessary (Marker Layer and Human Health Separation Layer).
- Protection of ongoing groundwater remediation works and the maintenance of adequate access to them to allow completion.
- Additional remediation of any unexpected contamination or contaminant hotspots (if necessary).
- 'Duty of Care' obligations under Waste Regulations to satisfy the conditions of Waste Recovery Licenses for the Olympic Park.
- Protection of boreholes and groundwater monitoring installations.

These obligations and responsibilities are further detailed in Table 1 of Appendix A, which includes a cross-reference to generic remediation design, specification and guidance documents and relevant planning conditions.

## 3.2 Implementation: Application Form ATK-084

Follow on Projects shall submit a PTP application for the 'Protection of Remediation Works' (ATK-084) for any excavation works and under any circumstances where FOP construction works will result in the disturbance or penetration of the EWFL, irrespective of whether or not the works are of a sufficient depth to penetrate the Marker Layer.

Protection of Remediation works applications shall be submitted to the PTP Team ([permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com)) a minimum of 5 working days prior to the commencement of such works. Applications shall be made on an ATK-084 form, shown in the following pages. An electronic version of this form shall be issued to all FOP Teams.

The ATK-084 application should indicate the maximum plan size of any excavation. This will not generally be greater than one section of trench up to 100 metres long, or an area of ground works with plan dimensions up to 25 metres in any one direction (exceptions to these dimensions of works should be agreed with the PTP Team directly and in advance). The FOP may prepare standard method statements that may be referenced in the ATK-084 application to assist in the assessment and granting of the ATK-084 Protection of Remediation Works Permit by the PTP Team.

The ATK-084 application procedure shall be as follows:

1. FOP Team completes Section A of the ATK-084 proforma and submits it electronically to [permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com), with all necessary supporting documentation (as indicated in the ATK-084 proforma and this PTP Protocol);
2. The PTP Team will review the application and if the planned works comply with this Protocol, will sign off Section B of the ATK-084 proforma and return it to the applicant;
3. On completion of works, the FOP Team completes Section C of the ATK-084 proforma and returns it to the PTP Team ([permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com)) together with necessary earthworks volume information, SMARTStart verification and supporting as-built information;
4. If works have been conducted in accordance with the requirements of the PTP Protocol, the PTP Team will sign off Section D and return it to the FOP Team, closing the ATK-084 application;
5. If the works have **not** been carried out in accordance with the requirements of the PTP Protocol, the FOP shall undertake additional works or provide additional information, which the PTP Team may reasonably require.



London 2012 Olympic Park		PERMIT TO PROCEED	
PROTECTION OF REMEDIATION WORKS: FORM ATK-084			
PTP Reference: <i>(To be completed by PTP team)</i>			
Dear Sirs, With respect to the protection and maintenance of previously completed ground remediation works and site specific remediation strategies we hereby submit this Permit to Proceed application for our intrusive works and for your acceptance. We understand we initially require your completed section B <u>prior to commencement</u> of our works and that we are responsible for the integrity of the remediation works.			
<b>SECTION A</b> <i>(Please complete &amp; submit to <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> 5 days prior to works)</i>			
Prepared by		Authorised by	
of Company		of Company	
Date		Date	
Follow on Project	<i>(eg SBH Lot X)</i>	Principal Contractor	<i>(i.e. the PC in control of the LA site)</i>
Title of Works	<i>(eg H12 north abutment)</i>	FOP Reference	<i>(if different from PTP reference)</i>
Construction Zone		Works Start Date	
LA Site Reference		Works Finish Date	
Co-ordinates of works	<i>(Olympic Grid or Ordinance Survey)</i>		
Drawing Reference	<i>(Attach drawing or sketch indicating the location of works)</i>		
Description of works			
Dimension of works (incl. depth)			
Method Statement Reference(s)	<i>(Attach applicable method statements, including specific MS for unexpected contamination or invasive species removal works where necessary)</i>		
Piling Risk Assessment Ref.	<i>(Required by the EA for piling works)</i>		
Existing Marker layer depth			
Earthworks above marker layer (m <sup>3</sup> )			
Earthworks below marker layer (m <sup>3</sup> )			
Historic boreholes at vicinity of works			
Planned backfill material types			
<b>Additional Comments:</b>			
<b>SECTION B</b> <i>(Completed by and returned from Permit to Proceed Team prior to works)</i>			
Prepared by		Authorised by	
of Company		of Company	
Date		Date	
Accepted	Yes / No		
<b>Conditions of acceptance / reason for non-acceptance:</b>			
<b>Distribution:</b> <i>Originating Team, Principal Contractor, CLM Project Manager, RemTech Team.</i>			

**SECTION C** (Please complete and return to [permit.to.proceed@london2012.com](mailto:permit.to.proceed@london2012.com) on completion of the works)

Dear Sirs,

We confirm completion of works in accordance with the methods described in Section A and conditions described in Section B. On the basis of the following information and the attached supporting documents, we request that this application be formally closed.

Prepared by		Authorised by	
of Company		of Company (PC)	
Date		Date	

<b>C1: COVER LAYER</b>	<b>Reinstated</b>	<b>Altered</b>	<b>Omitted</b>
Marker Layer	Yes / No	Yes / No	Yes / No
Human Health Separation Layer	Yes / No	Yes / No	Yes / No

Comments or description of cover system reinstatement	<i>(Detail Marker Layer and Human Health Separation Layer materials and any reasons for specific omission)</i>
---	--

Photo record of excavation and Marker Layer reinstatement	<i>(Attach photograph record document)</i>
---	--

As-Built drawings provided	<i>(Attach as-built drawing or sketch indicating cover system reinstatement)</i>
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<b>C2: EXCAVATED VOLUMES</b>	<b>Above Marker Layer (m<sup>3</sup>)</b>	<b>Below Marker Layer (m<sup>3</sup>)</b>
------------------------------	---	---

Total cut		
-----------	--	--

Cut volume retained (on site)		
-------------------------------	--	--

Cut volume to Soil Hospital		
-----------------------------	--	--

Cut volume sent off Olympic Park		
----------------------------------	--	--

Related ATK-088 Export Application(s):	
--	--

SMARTWaste References	<i>(Attach spreadsheet from SMARTStart detailing relevant entries)</i>
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<b>C3: FILL VOLUMES</b>	<b>Above Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>	<b>Below Marker (m<sup>3</sup>)</b>	<b>Chemical Tests (no.)</b>
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Total fill				
------------	--	--	--	--

Site won fill (reused)				
------------------------	--	--	--	--

Fill from Soil Hospital				
-------------------------	--	--	--	--

Fill from outside Olympic Park				
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Related ATK-088 Import Application(s):	
--	--

**Additional Comments:**

**SECTION D** (Application is closed by the Permit to Proceed Team following review of Section C and returned to FOP Team)

Prepared by		Authorised by	
of Company		of Company	
Date		Date	

Accepted & Closed	Yes / No
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**Comments or conditions on closure / reason for non-closure of application:**

**Distribution:** Originating Team, Principal Contractor, CLM Project Manager, RemTech Team, EW Project Manager.



**APPENDIX A:**

**SUMMARY OF FOLLOW ON PROJECT OBLIGATIONS  
COVERED UNDER THE PERMIT TO PROCEED PROTOCOL**

Table 1: Summary of Follow on Project Obligations Covered Under the Permit to Proceed Protocol

FOP Obligation / Responsibility	Description	Applicable Remediation Design Documents, Guidance Documents and Planning Conditions	PTP Implementation and Auditing
<p>Ensure works comply with site remediation design specifications</p>	<p>Earthworks materials used within the Olympic Park must comply with remediation design specifications applicable to the Planning Delivery Zone (PDZ) in which the works are being undertaken.</p> <p>All earthworks materials placed by FOP Teams (above or below the ML) shall meet the Site Specific Assessment Criteria (SSAC) outlined in applicable remediation design documents.</p>	<p>The Soil Hospital Protocol: Management of Olympic Park Earthworks Materials.                      Site Specific Remediation Strategy (SSRS)                      Site Specific Remediation Specification (SSRSpec)                      Remediation Method Statement                      Site Validation Reports (where available)                      Global Remediation Strategy</p> <p><i>OD.0.36 Validation of the Remediation Works for the purposes of human health protection must be provided within two months of completion of the Final Build Layer within any Construction Zone. When all works for the protection of human health are completed within each Planning Delivery Zone, a consolidated validation report, drawing together the Construction Zone validations, shall be submitted to the Local Planning Authority. This shall include topographic mapping of the final finished ground levels.</i>                      Reason: To ensure the protection of human health and avoidance of pollution of controlled waters.</p> <p><i>OD.0.37 Approved post-remediation monitoring and maintenance of the remediated land shall continue, as set out in the validation reports, until such dates or events as are approved by the Local Planning Authority.</i>                      Reason: To ensure the protection of human health and avoidance of pollution of controlled waters.</p> <p><i>OD.0.39 No soils or infill materials (including silt dredged from watercourses), shall be imported onto the Site until it has been satisfactorily demonstrated that they present no risk to human health, planting and the environment. Documentary evidence to confirm the origin of all imported soils and infill materials, supported by appropriate chemical analysis test results, shall be submitted to and approved by the Local Planning Authority prior to that import. The import onto Site of material classified as 'waste' is only acceptable with the prior approval of the Local Planning Authority.</i>                      Reason: To ensure that no contaminated material is brought onto Site.</p>	<p>FOP Teams submit an ATK-088 Application (Request from Contractor) to the Soil Hospital Team at <a href="mailto:soil.hospital@demrem.com">soil.hospital@demrem.com</a> (Refer to separate Soil Hospital Protocol document for further details.)</p> <p>FOP Teams submit an ATK-084 Application (Protection of Remediation Works) to the PTP Team at <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> detailing the scope of works and arrangements for completing works in accordance with the site remediation design.</p> <p>Section C of Form ATK-084 requires that information on the number of chemical tests performed on backfill materials is reported.</p> <p>In auditing the works the PTP Team may request evidence and details of sampling and chemical testing of backfill materials.</p>
<p>Ensure works do not invalidate any previously completed site remediation works</p>	<p>Completed remediation works that must be maintained may include (but are not limited to):</p> <ul style="list-style-type: none"> <li>• Placed fill materials that comply with applicable remediation design documents (as above)</li> <li>• Cut off walls and sheet piling</li> <li>• Low permeability layers</li> <li>• Gas membranes</li> <li>• Groundwater or ground gas monitoring boreholes</li> <li>• Groundwater remediation systems</li> </ul> <p>In addition FOP Teams must ensure that pathways are not created in the ground that could:</p> <ul style="list-style-type: none"> <li>• invalidate any completed Remediation Works</li> <li>• present any pollution risks to controlled waters</li> <li>• cause any ingress of ground borne gases or vapours to any buried structures</li> </ul> <p>This shall be achieved by selecting, designing and constructing piling, deep foundation works and ground treatment methods that do not create such pathways (in this regard, the guidance and requirements of the Environment Agency shall apply).</p>	<p>Site Specific Remediation Strategy (SSRS)                      Site Specific Remediation Specification (SSRSpec)                      Remediation Method Statement                      Site Validation Reports (where available)                      Global Remediation Strategy                      EA Guide to Contractors on the Olympic Park                      Environmental Protection Requirements for Piling (REP-ATK-CG-ZZZ-ZZZ-ZZZ-Z-0001)                      Soil Gas and Vapour Risks: A Briefing Note to Designers (REP-ATK-CM-ZZZ-OLP-ZZZ-Z-0001)</p> <p><i>OD.0.26 Before the construction of each building is commenced, details of the foundations and piling, the means by which previously installed remediation measures are to be safeguarded and any measures to prevent ingress of gaseous contaminants into that building or the contamination of controlled waters, shall be submitted to and approved by the Local Planning Authority.</i>                      Reason: To avoid risk to human health or contamination of controlled waters.</p> <p><i>OD.0.59 Before construction of any bridge or other structure requiring foundations is commenced, details of foundation design, including details of any piling and a method statement for any piling, shall be submitted to and approved by the Local Planning Authority.</i>                      Reason: To avoid risk to human health or contamination of controlled waters.</p>	<p>FOP Teams submit an ATK-084 (Protection of Remediation Works) Application to the PTP Team at <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> detailing the scope of works and any proposed measures to protect completed remediation works and prevent any adverse environmental effects.</p> <p>Section C of Form ATK-084 requires information on the number of chemical tests on backfill materials and as-built details to prove integration. Any details of vapour protection measures should also be reported in Section C.</p> <p>In auditing the works the PTP Team will inspect methods of piling and other intrusive works. Where necessary, the PTP Team will check that piling risk assessments have been approved by the Environment Agency.</p>



FOP Obligation / Responsibility	Description	Applicable Remediation Design Documents, Guidance Documents and Planning Conditions	PTP Implementation and Auditing
Reinstate or install remediated ground cover systems (Marker Layer and Human Health Separation Layer)	<p>Project works must maintain the integrity of existing site remediation and remediated ground cover systems.</p> <p>The majority of FOP Teams will need to penetrate installed ML and HHSL elements and excavate materials beneath those layers to construct foundations or install utilities. Where the ML is penetrated or altered it must be reinstated and integrated within final constructed levels to ensure that applicable remediation designs are met.</p> <p>FOP Teams shall ensure that the ML is reinstated immediately beneath materials that satisfy SSAC for HHSL and that any altered location and level of the ML is accurately recorded.</p> <p>ML and HHSL requirements may differ between or within Planning Delivery Zones.</p> <p>In some instances it will be more practical to locally deepen or raise the ML. Significant changes to ML depth will require approval from the Planning Decisions Team (PDT) and FOP Teams should seek approval from the PDT where any such changes or omissions are proposed.</p>	<p>Site Specific Remediation Strategy (SSRS)  Site Specific Remediation Specification (SSRSpec)  Remediation Method Statement  Site Validation Reports (where available)  Global Remediation Strategy  Any approved supplementary design for ML and HHSL (which may allow omission of ML and/or HHSL), as submitted to and approved by the Planning Decisions Team</p> <hr/> <p><i>OD.0.37 Approved post-remediation monitoring and maintenance of the remediated land shall continue, as set out in the validation reports, until such dates or events as are approved by the Local Planning Authority.</i>  Reason: To ensure the protection of human health and avoidance of pollution of controlled waters.</p>	<p>FOP Teams submit an ATK-084 Application (Protection of Remediation Works) to the PTP Team at <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> detailing the scope of works and arrangements for the protection of remediation works.</p> <p>Section C of Form ATK-084 requires that photographic evidence and as-built drawings are supplied to detail reinstatement of ML and HHSL elements.</p> <p>In auditing the works the PTP Team may request evidence of adequate ML reinstatement and integration into FOP works.</p>
Protect groundwater remediation works and maintain adequate access to them	<p>Several sites across the Olympic Park contain active groundwater remediation systems. Some of these are intended to remain operational throughout the Olympic Park construction period and into Legacy phases.</p> <p>FOP Teams must protect all elements of such groundwater remediation systems, including any extraction or injection wells and connecting pipe work and cable routes. Other elements of the installed remediation systems may include compound areas containing operational plant and storage areas for ancillary equipment.</p> <p>Groundwater monitoring wells used to assess the progress of groundwater remediation works must also be maintained.</p>	<p>Site Specific Remediation Strategy (SSRS)  Site Specific Remediation Specification (SSRSpec)  Remediation Method Statement  Site Validation Reports (where available)  Global Remediation Strategy  Global Groundwater Monitoring Strategy  Site Specific Groundwater Treatment Method Statement</p> <hr/> <p><i>OD.0.37 Approved post-remediation monitoring and maintenance of the remediated land shall continue, as set out in the validation reports, until such dates or events as are approved by the Local Planning Authority.</i>  Reason: To ensure the protection of human health and avoidance of pollution of controlled waters.</p>	<p>FOP Teams submit an ATK-084 Application (Protection of Remediation Works) to the PTP Team at <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> detailing the scope of works and arrangements for the protection of any known groundwater remediation equipment and works (within appended Method Statements).</p> <p>In auditing the works the PTP Team may request evidence of adequate project integration between FOP works and incumbent groundwater remediation contractors.</p>
Unexpected contamination	<p>If unexpected contamination is encountered during earthworks, the PTP Team and the Planning Decisions Team should be notified and a methodology for the assessment, remediation and validation of the affected area shall be prepared to support a Remediation Change Note as required by Planning Condition OD.0.38.</p>	<p>Site Investigation Reports  Site Specific Remediation Strategy (SSRS)  Site Specific Remediation Specification (SSRSpec)  Remediation Method Statement  Site Validation Reports (where available)  Global Remediation Strategy</p> <hr/> <p><i>OD.0.38 If at any time during the construction of the Olympic Development, contamination is encountered which was not previously identified or treated or has been brought to the surface by construction activity, construction work in that Construction Zone shall not proceed (except to the extent that it would not further disturb that contamination) until a Remediation Change Note, containing an assessment of that contamination and a scheme and timetable to contain, treat or remove it has been submitted to and approved by the Local Planning Authority and any necessary remediation has been carried out.</i>  Reason: To ensure the protection of human health and avoidance of pollution of controlled waters.</p>	<p>FOP Teams shall submit an ATK-084 Application (Protection of Remediation Works) to the PTP Team at <a href="mailto:permit.to.proceed@london2012.com">permit.to.proceed@london2012.com</a> (as well as an ATK-088 Application to cover the transfer of excavated materials).</p> <p>The application shall detail excavations and earthworks associated with any remediation works, supported by method statements, as required by OD.0.38.</p>



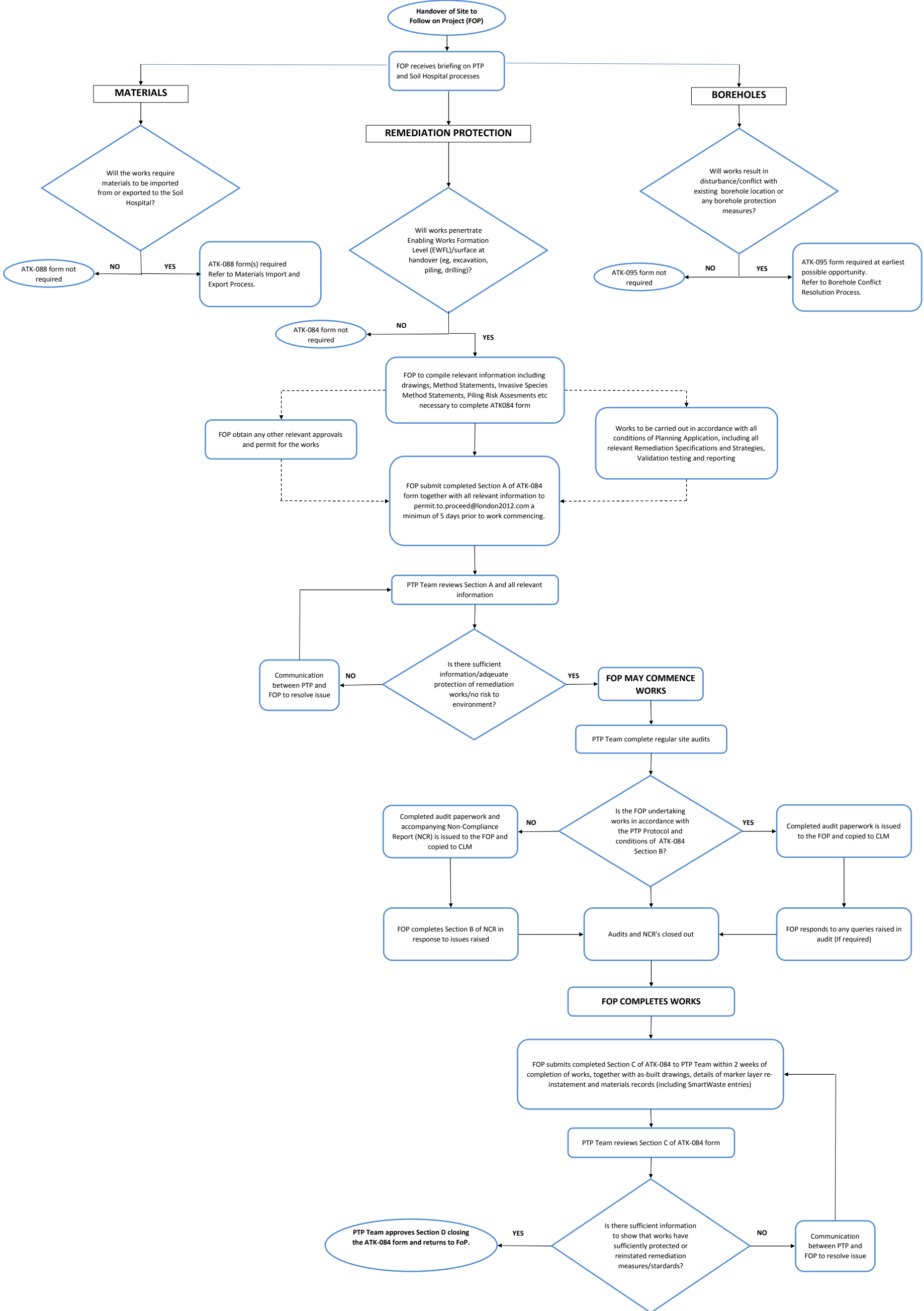
<p>Uphold 'Duty of Care' obligations under Waste Regulations and satisfy conditions of Waste Recovery Licenses for the Olympic Park</p>	<p>The recovery and re-use of materials within the Olympic Park is authorised by two Waste Recovery Licenses held by the Olympic Delivery Authority.</p> <p>By legislation, excavation within a contaminated or 'Brownfield' site requires that materials must be characterised before being excavated or re-used. The Principal Contractor of any site is the responsible party under Waste Regulation 'Duty of Care' obligations, the Environment Act (including associated legislation) and the Waste Recovery Licenses for the Olympic Park.</p> <p>Any Principal Contractor conducting earthworks within the Olympic Park is therefore deemed a Waste Operator and must meet obligations associated with the handling of waste and recycled earthworks materials. Those obligations include the requirement to maintain accurate information relating to earthworks materials excavated from or placed within the site and to ensure traceability of material movement within and between different sites across the Olympic Park.</p> <p>The ODA has determined that BRE's SMARTStart system shall be used within all projects to allow electronic records of all material movements and final deposition locations of to be referenced and traceable.</p>	<p>Environmental Permit No. EAWML80790 (South Park Waste Management License)  Environmental Permit No. EAWML80791 (North Park Waste Management License)  Construction Waste Management Plan (CLM-D0701-Rep-CWMP-v1.6.doc)  Memorandum of Understanding for Waste Management Licensing Applied to the Olympic Park (Appended to CWMP)  A Guide to Material Movements: London 2012 Enabling Works (GUI-MOR-CE-ZZZ-ZZZ-XXX-E-0015)</p> <p><i>OD.0.39 No soils or infill materials (including silt dredged from watercourses), shall be imported onto the Site until it has been satisfactorily demonstrated that they present no risk to human health, planting and the environment. Documentary evidence to confirm the origin of all imported soils and infill materials, supported by appropriate chemical analysis test results, shall be submitted to and approved by the Local Planning Authority prior to that import. The import onto Site of material classified as 'waste' is only acceptable with the prior approval of the Local Planning Authority.</i>  <i>Reason: To ensure that no contaminated material is brought onto Site.</i></p>	<p>References of SMARTStart entries relating to specific works must be provided to the PTP in Section C of ATK-084 applications and if necessary be backed up with a printed spreadsheet of information generated from SMARTStart.</p> <p>This information is required to ensure materials are being adequately tracked in SMARTstart and to ensure that obligations under Waste Recovery Licenses are being fulfilled.</p>
<p>Protection of Boreholes and Groundwater Monitoring Installations</p>	<p>FOP Teams must protect, preserve and ensure access to all existing boreholes and monitoring locations, unless or until the Soil Hospital Team formally confirm alternative arrangements and/or arrange for borehole decommissioning.</p> <p>Identification and resolution of conflicts between borehole locations and FOP construction works are detailed in the Soil Hospital Protocol.</p> <p>Any damage to an operational borehole will be reported as an Environmental Incident and should be raised by the FOP responsible for the damage and be reported to the Soil Hospital Team and CLM Assurance.</p>	<p>Site Specific Remediation Strategy (SSRS)  Site Specific Remediation Specification (SSRSpec)  Remediation Method Statement  Site Validation Reports (where available)  Global Remediation Strategy  Global Groundwater Monitoring Strategy  Site Specific Groundwater Treatment Method Statement</p> <p><i>OD.0.37 Approved post-remediation monitoring and maintenance of the remediated land shall continue, as set out in the validation reports, until such dates or events as are approved by the Local Planning Authority.</i>  <i>Reason: To ensure the protection of human health and avoidance of pollution of controlled waters.</i></p>	<p>FOP Teams submit an ATK-095 Application (Borehole Conflict) to the Soil Hospital Team at <a href="mailto:soil.hospital@demrem.com">soil.hospital@demrem.com</a> a minimum of six-weeks prior to occurrence of conflict with FOP works. (Refer to separate Soil Hospital Protocol document for further details.)</p> <p>During audits the PTP Team will review borehole protection measures installed at any site and request that any potential risks to borehole installations are rectified and that any damage is reported.</p>



**APPENDIX B:**

**PERMIT TO PROCEED PROCESS DIAGRAM**

Protection of Remediation Works Process - Form ATK-084





## **APPENDIX D:**

### **Appendix D: PPDT / Hyder Comments and Responses**



## Olympic Delivery Authority PDT

### EIA & Site Remediation Advisory Services Call Off Contract

#### DOCUMENT REVIEW

Application No.	Submission Title	Submission Ref.	Applicant Author	Date of Document Review	HCL Task Ref.
12/00068/AOD (formerly 12/90375/AODODA)	LOCOG (Stage 3) Consolidated Validation Report – Planning Delivery Zone 2	ATK-WI-O-XX-XX-OPK-REP-XX-0002	Atkins	05/10/12 23/10/12 13/12/12	REM 302



The report titled “*LOCOG (Stage 3) Consolidated Validation Report – Planning Delivery Zone 2*” has been reviewed by Hyder Consulting on behalf of the PDT to determine compliance with the Facilities and Legacy Planning Condition OD.036 Protection and Validation of Remediation. The report has been reviewed against the requirements of this Condition as outlined in ‘*Remediation and Follow-on Works – Follow on Contractors Interaction with the Olympic Delivery Authority Planning Decisions Team*’ document.

**Table 1 - HCL Comments**

Ref.	Submission Section / Aspect	HCL Comment <b>LOCOG Response 11/10/12</b> Hyder Review 23/10/12 <b>LOCOG Response 11/12/12</b> Hyder Review 13/12/12
1.1	Drawings 1 and 2	Please add the redline of the site being validated, approximate if necessary. A hand-drawn mark-up will be adequate, so no new CAD work is required. <b>Hand drawn sketch will be provided with approximate boundaries.</b> Hyder: Please amend the final report accordingly. Assuming this is done, no further comment. LOCOG 11/12/12: Please see revised Drawing 2 of the enclosed Final Stage 3 CVR detailing the redline boundary. Hyder: Drawing 2 has been updated to show redline. No further comment.
1.2	Drawing 4	Is this plan relevant given LOCOG’s Olympic only responsibility. If this plan is considered necessary, we suggest that the Legacy plan from the Stage 2 CVR replaces the EDAW plan which may not be up to date. <b>It provides context, but happy to remove drawing.</b> Hyder: Please amend the final report accordingly. Assuming this is done, no further comment. LOCOG 11/12/12: Drawing 4_SKE-EDW-UD-ZZZ-ZZZ-XXX-CA0006 has been removed and replaced by the Legacy plan from the Stage 2 CVR (0241-ENW-PWD-C-DGA-0203). Hyder: No further comment.
1.3	Appendix B	Is the intention that the CVR does not duplicate reports that have already been submitted to PDT? If this is case there may be little merit in the reports included in Appendix B and furthermore, these may not be the latest / approved versions. <b>The common domain works are presented through PTPs and is in effect new information. Given the small number of reports LOCOG produced, it was considered appropriate for these to be appended to the respective CVR (electronically only).</b> Hyder: To avoid confusion the final CVR must include the final approved versions of the individual LOCOG reports, not earlier iterations LOCOG 11/12/12: Appendix B revised and contains only final approved versions of LOCOG contractor documentation for PDZ2. Hyder: No further comment.
1.4	Section 1.6	The process for reporting the re-instatement still needs to be agreed between PDT, LOCOG and LLDC. This aspect remains in abeyance until agreement achieved. <b>As per our discussions in the Remediation Forum yesterday (11/10).</b> Hyder: The report must be updated to reflect the proposals set out in LOCOG’s email to LLDC PPDT of 19 <sup>th</sup> October 2012, 09.28hrs. LOCOG 11/12/12: Please see revised text of Section 4.1, to which reference is made in Section 1.6. It is considered that as all necessary amendments are captured in Section 4.1, that no amendments to Section 1.6 are necessary. Hyder: Section 4.1 has been updated as proposed. No further comment.
1.5	Section 2.1	Somehow the CVR needs to portray where LOCOG have completed, disturbed or added to the existing remediation profile. To do this, we suggest that Figures 6 and 7 from the CVR Stage 2 are included in your report and augmented by hand if necessary to show where you completed, disturbed or added to the HHSL or penetrated the marker layer. A hand-drawn mark-up will be adequate, so no new CAD work is required. <b>This is clearly set out in Section 3 and Appendix B. Not sure why there is a need for duplication of effort and re-interpretation/ re-presentation of info is required.</b> Hyder: In abeyance until we agree what is reasonable to be included in the CVR. LOCOG 11/12/12: Please see additional Drawings 5 and 6. However, it is important to note that whilst these show post-games validation locations, they demonstrate the locations where LOCOG made each pop-up utility connection and the areas within which works were undertaken to install the showcase venues. Any supporting information regarding the post-games validation of any of these locations will be provided to LLDC for inclusion in the Stage 4 CVRs. Hyder: Drawings 5 and 6 have been provided showing location of LOCOG’s works. No further comment.
1.6	Section 3.1 Summary of Works	Please add the ODA reference to the reports discussed in this section. This aids public scrutiny. <b>All referenced documents in Section 3.1 are included in Appendix B.</b> Hyder: To be clear we are requested that all referenced reports included or referred to in the CVR are accompanied by the specific ODA PDT Application reference number to enable 3 <sup>rd</sup> party scrutiny. LOCOG 11/12/12: Going through all the documentation we can confirm that no ODA references have been generated for reports prepared by third party contractors. We assume that this was because these reports were prepared for LOCOG and not the ODA and unfortunately LOCOG did not set up a similar documentation referencing system. In these instances, and as they have already been approved, we will refer to the relevant Appendix where they are presented and, in the case of the approved showcase validation report, also reference the relevant planning application reference which has been made in Section 3.1.1. An ODA reference has however been generated for the Stage 3 CVR, so public scrutiny of this report will capture the third party reports. Hyder: No further comment.
1.7	Section 3.1 Summary of Works	Preceding CVRs have a separate Appendix (B) summarising all the relevant RMS and Validation Report documents for each PDZ. Is Section 3.1 of your report intended as an equivalent to this? If so, does it summarise all the relevant LOCOG or showcase RMS and validation reports? <b>Yes, this discusses the McDonald’s Sponsor Showcase Validation report and the Common Domain works completed under PTP.</b> Hyder: Please check that Section 3.1 and Appendix B are consistent. <ul style="list-style-type: none"> <li>Appendix B1 = Sponsor Showcase; Appendix B2 = Common Domain areas, BP Walk in the Park, Utility Connections, Temporary Structures.</li> <li>Section 3.1 = Sponsor Showcase, 3.1.2.1 = BP Walk in the Park, 3.1.2.2 = Zone 2 Utility Connections, 3.1.2.3 = Temporary structures, 3.1.2.3.1 = Temporary Tents, 3.1.2.3.2 = Site Cabins</li> </ul> LOCOG 11/12/12: Checked and minor amendments made – Section 3.1 and Appendix B are now consistent with each other. Hyder: Amendments made to Section 3.1 as proposed. No further comment.

Ref.	Submission Section / Aspect	HCL Comment <b>LOCOG Response 11/10/12</b> Hyder Review 23/10/12 <b>LOCOG Response 11/12/12</b> Hyder Review 13/12/12
1.8	Section 3.1 Summary of Works	Does this section include new information not already provided to PDT? If so, this should be made clear and explained why this is the case. Furthermore the report introduction should confirm that new information is provided. <b>The works completed through a PTP are an internal control methodology to demonstrate works have been carried out appropriately. Such works are wrapped up in this CVR. The report will be updated accordingly.</b> Hyder: subject to reviewing the updated text, no further comment. LOCOG 11/12/12: Please see amended text in Section 3.1. Hyder: No further comment.
1.9	Section 3.1.2.1	The first part of the paragraph indicates that the void was backfilled with concrete and lined with a new marker layer The last sentence suggests that un-bound virgin materials were used. Please clarify. <b>All excavated materials were removed from Site. Will remove the final two sentences from this section.</b> Hyder: subject to reviewing the updated text, no further comment. LOCOG 11/12/12: Please see amended text in Section 3.1.2.1 with final two sentences removed. Hyder: No further comment.
1.10	Section 3.1.2.2	Above marker layer materials are indicated to be virgin-sourced Type 1 materials originating from the ODA profile. Which report demonstrates that this material is virgin-sourced? Understood from ODA – see Stage 2 CVR. <b>We understand that given the HHSL criteria, all HHSL materials had to be “non-waste” materials as per Stage 2 CVR</b> Hyder: This assumption is acknowledged, but the applicant must demonstrate (or reference the relevant documentation) that the material in question is virgin aggregate and therefore does not need specific validation testing. Does the ODA’s deposition plan demonstrate that this is virgin material? LOCOG 11/12/12: Relevant text has been amended slightly and reference to the LPR validation report for PDZ2 made. Hyder: No further comment.
1.11	Section 3.1.2.3	This section is written like a method statement – i.e. proposed mitigation – which contradicts the style of the remainder of report. Are the proposals listed in this section validated anywhere? <b>The reason for this approach is that the assessments were carried out on the basis of a design. The design was constructed and therefore the assessments remain valid. Should there have been an alteration then it would have been recorded.</b> Hyder: How is “ <i>The design was constructed and therefore the assessments remain valid</i> ” demonstrated? By all means the applicant may wish to discuss this further. LOCOG 11/12/12: As discussed and agreed at our meeting of 14/11/12 with Hyder and PPDT please see revised text of Section 3.1.2.3. Hyder: Section 3.1.2.3 has been amended. No further comment.
1.12	Section 3.1.2.3.1	The first paragraph indicates that PTPs can only be closed out when tent pegs are removed. If this is the case, then have the PTP records been closed out. <b>When all of the tents pegs have been removed, the PTP will be closed and formally issued to the PDT. As this is considered reinstatement works, these will be closed out via LLDC as agreed in Remediation Forum (11/10/12).</b> Hyder: Please update the report to reflect the above. LOCOG 11/12/12: Please see revised text of Section 3.1.2.3.1. Hyder: Revised section 3.1.2.3.1.confirms LLDC to close PTPs. No further comment.
1.13	Section 3.1.2.2	The residual list makes reference to McNicholas and the potential re-use of unremediated ground. Is this relevant to the works presented in Section 3.1.2.2 <b>No, a different section of the works.</b> Hyder: Please update the report to reflect the above. LOCOG 11/12/12: Please see updated text in Tables 3.1 and 4.1. Hyder: No further comment.
1.14	Section 3.1.2.4	Is this hardcover permanent and has it been validated? <b>LOCOG works are for Olympic Mode only.</b> Hyder: Please update the report to reflect the above. LOCOG 11/12/12: Please see revised text in Section 3.1.2.4. Hyder: No further comment.
1.15	Tables 3.1 & 4.1	For ease of reference, we recommend that you list the residual items verbatim from the CVR Stage 2, with any new LOCOG residual items added at the end. Currently the stage 2 CVR lists 15 residual items. <b>We have used the latest (at the time) residual list from the ODA. Again, we will use the latest when we submit the final CVR for approval.</b> Hyder: Subject to review of the final document, no further comment. LOCOG 11/12/12: Please see revised text of Tables 3.1 and 4.1 which list the residual items verbatim from the Stage 2 CVR as requested, although please note that some minor textual changes have been made as considered necessary. Hyder: No further comment.
1.16	Section 3.8	Is the quantity of re-used material, even approximate, known? <b>We can include an approximate volume based on PTPs, although the benefit appears limited given the level of works required is already provided in Appendix B?</b> Hyder: Please update the report to reflect the above. LOCOG 11/12/12: Please see revised text in Section 3.8. Hyder: No further comment.



Ref.	Submission Section / Aspect	HCL Comment
		<p><b>LOCOG Response 11/10/12</b>  <b>Hyder Review 23/10/12</b>  <b>LOCOG Response 11/12/12</b>  <b>Hyder Review 13/12/12</b></p>
1.17	Section 4.1	<p>Your proposals for validating your re-instatement works are not accepted and shall be in abeyance until PDT and LLDC are in agreement on a way forward.</p> <p><b>As agreed at the Remediation Forum (11/10/12)</b>  Hyder: The report must be updated to reflect the proposals set out in LOCOG's email to LLDC PPDT of 19<sup>th</sup> October 2012, 09.28hrs.  LOCOG 11/12/12: Please see revised text in Section 4.1.  Hyder: Section 4.1 updated as per agreed approach. No further comment.</p>
1.18	Section 4.1	<p>Notwithstanding the above, the CVR must provide some understanding of how the re-instatement will materially affect the existing remediation profile. As such, can a simple mark-up drawing be included in the report indicating the location and typical details (depth of dig, type of backfill, how validated) of the re-instatement?</p> <p><b>The LOCOG works have not materially affected the remediation profile, as set out in our RMS, Validation Reports and PTPs. We therefore do not see the benefit in re-presenting or re-interpreting information that is concisely and succinctly provided in Appendix B. Reinstatement works will be closed out through PTPs or Agreed Field Records to facilitate LLDC progress noting all works will be above marker layer. As agreed at Remediation Forum 11/10/12.</b>  Hyder: At the very least a drawing showing the location of re-instatement should be provided in the CVR. LOCOG has excavated, handled, stored or replaced some ODA materials as part of the pre-Olympic work and re-instatement may do the same, so we have no evidence to indicate that a material change has not occurred.  LOCOG 11/12/12: Please see new Drawing 7_Plan of LOCOG &amp; Sponsor Showcase Validation Areas.  Hyder: Drawing 7 has been provided confirming location of validation areas. No further comment.</p>
1.19	Section 4.1	<p>Any materials deposited as part of the re-instatement must be demonstrated to be suitable for use.</p> <p><b>All works will be in above marker layer materials. Therefore, only "Non-waste" materials are being used for the backfill of any excavations. Excavations are in discrete locations across the Park that will be segregated by fencing and located on hardstanding. We do not see why re-testing will be required given the tight control on materials and the small volumes involved on a predominantly hardcovered site. Should imported materials be required these will be virgin-sourced and a IoF submission made.</b>  Hyder: To be clear, our request relates to validation, not specifically testing. LOCOG may decide to validate the acceptability of virgin materials by the methods presented in the Import of Fill framework. If re-use of ODA materials is proposed, again testing may or may not be necessary, dependent on the material type. Blindly accepting the proposal that no validation is necessary because the material in question is virgin quarried (not demonstrated) is not in our opinion adequate.  LOCOG 11/12/12: Please see revised text in Section 4.1 and the separate IoF submission approved by PPDT.  Hyder: No further comment.</p>
1.20	Spatial coverage of reports	<p>A simple drawing showing the spatial extent of the LOCOG / Showcase validation reports should be included in the report, even if a hand-drawn mark-up.</p> <p><b>This drawing referred to above will be provided showing the approximate location of the area being validated.</b>  Hyder: subject to review of the drawing, no further comment.  LOCOG 11/12/12: Please see new Drawing 7_Plan of LOCOG &amp; Sponsor Showcase Validation Areas.  Hyder: Drawing 7 has been provided confirming location of validation areas. No further comment.</p>
1.21	Drawing 6	<p>This is marked as "not for construction". Can this be updated to at least be shown "for construction" or if possible, "as constructed".</p> <p><b>This is the design of all pavements across the Park and I understand that the design has been implemented.</b>  Hyder: If the pavement is permanent then this needs to be validated much like any other hardstanding. If the pavement is temporary and to be replaced by re-instatement works, then this should be explained in the report.  LOCOG 11/12/12: Please see revised drawing which is now labelled as Drawing 9.  Hyder: Drawing 9 has been provided which confirms constructed pavement details. No further comment.</p>
1.22	RARAR	<p>Please confirm in the report whether or not LOCOG did any works in RARAR areas.</p> <p><b>We have carried out our works in the areas defined in our report. All other works have been carried out by the ODA.</b>  Hyder: Please demonstrate within the report whether or not LOCOG has carried out any works in the RARAR areas.  LOCOG 11/12/12: We have looked at the drawings provided in the latest Retained Areas Risk Assessment Addendum report for PDZ2 and can confirm that no LOCOG works were undertaken within any of the RARAR areas in PDZ2. Please also see additional text in Section 2.2.  Hyder: Section 2.2 has been updated to explain that no works were carried out in RARAR areas. No further comment.</p>