WALTHAMSTOW WETLANDS
Stage C Report Amendment
For Client Approval to Proceed to Stage D
KLA Design Team

802 R003 Stage C Report Amendment
Introduction

- Cost Saving Summary : Landscape
  - Landscape cost saving summary
  - Car Park Access Note by Project Centre
  - Access Requirement Recommendation by Tom Lister

- Cost Saving Summary : Architecture
  - Architectural cost saving summary
  - Ranger’s Building
  - Coppermill viewing tower

- Costs - removed as confidential

- Risk Register - removed as confidential
This report has been produced to outline the cost savings achieved by the design team following the client’s request at the Steering Group meeting on the 19th September 2013.

This document will act as an amendment to the stage C report issued on the 23rd August 2013 and will require client sign off to allow the design team to progress to Stage D.

Landscape Cost Saving Summary
This section of the report locates the key areas of saving achieved in the landscape design. Two guidance notes have also been included which address:

- **Car Park Access Amendments**: Project Centre have reviewed the car park access alterations requested by the client and produced a short note describing the impacts of removing the coach turning area and having a single access point for visitors to the car park.

- **Path & Access Requirement Recommendation**: Tom Lister an access consultant has reviewed the suitability of a concrete surfaced route compared to a compacted gravel route.

Architectural Cost Saving Summary
This section of the report describes the proposed cost saving alterations to the Marine Engine House and includes the revised options for the Coppermill Viewing Tower & proposed refurbishment of the Ranger’s building.
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- Reduction of passing place cost
- Island management to be completed by LWT
- Tree planting removed from the Lockwood Way Entrance
- Planting removed from the Lockwood Way Entrance
- Balustrade specification adjusted
- Repairs to existing secondary routes to continue being repaired by the ground maintenance team
- Reduction in extent of regrading of existing routes

Cost Saving Summary:

- Island management to be completed by LWT
- Tree planting removed from the North Forest Road Entrance
- Balustrade specification adjusted
- Repairs to existing secondary routes to continue being repaired by the ground maintenance team
- Planting removed from the North Forest Road Entrance
- Balustrade specification adjusted

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KLA I 3rd Floor West, 1-3 Coate Street, London E2 9AG
Planting area reduced with enough retained to ensure a mature landscape from year 1.

Alternative DDA access provided between the car park and the pedestrian ramp & increase in area of asphalt to car park.

Coach drop off area removed and existing Ranger’s Office removed.

Furniture from entrance feature removed.

Car park barriers included - Cost increase.

Liaison with LBWF lighting engineer regarding possible LBWF adoption of lighting - Cost increase due to lighting specification change.

Pits reduced and ground source heat pump removed.

Pond / Skateboard Planting removed - Items to be delivered by LWT.

Reduction of passing places cost.

Repairs to existing secondary routes to continue being repaired by the ground maintenance team.

Reduction in extent of regrading along existing routes.

Island management to be completed by LWT.

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Tree planting removed.
Forest Road South Entrance

A. **Coach Drop Off Area Removed** : Existing Ranger’s building retained and wall retained. Reduces the extent of new fencing, gates and planting.
B. **Vehicle Access Surfacing** : Surface converted to asphalt to create a clear distinction between the concrete threshold and the vehicle route.
C. **Plant Area Reduced** : Extent of planted area reduced
D. **Car Park Excavation Reduced** : Extent of re leveling to the car park reduced. Previous design allowed for a direct DDA access route between the car park and access ramp. This has been removed and an alternative access along the boardwalk provided.
E. **DDA Parking** : The alternative access route between the car park and boardwalk requires the area of asphalt to increase to comply with equality/DDA guidance
F. **Lighting Specification** : We are currently liaising with the LBWF lighting engineer to discuss light levels and whether the LBWF would adopt the car park lighting. In order to do this the lighting will need to comply with the LBWF lighting specification and has been updated to reflect this.
G. **Concrete Platform** : Size of concrete platform reduced
Walthamstow Wetlands

Transport Technical Note

Comments on Revised Forest Road Car Park/ Access Design

September 2013

1. Introduction

This note considers the revised car park design and access options as shown on Kinnear Landscape Architects (KLA) drawing number 802 SK162. The key changes indicated are the retention of the existing Ranger’s building and subsequent removal of the previously proposed coach turning and drop area from the designs. It is proposed that all traffic will access the site from a widened western entrance with the exception of operational vehicles which will access the site via the existing eastern entrance. The following points are considered to be the main areas that will need to be considered in revising the current design. Once a preferred outline design is agreed, Project Centre will be able to undertake a full car park assessment including tracking of the entrance in order to inform the detailed design.

In making these comments, it is understood that the southern part of the car park and access to the Marine Engine House remains as per the Stage C submission (e.g. drawing 802 SK092). For general principles on the car park design, such as the dimension of spaces, please continue to refer to the Review of Design Options note issued by Project Centre in May 2013 and included in the Stage C Report appendices as a consolidated document containing the transport work undertaken to date.

2. Entrance

Whilst Manual for Streets (MfS) (HMSO, 2006) states that a width of 4.1m is sufficient for two cars to pass (increasing to 4.8m for a car and a lorry or 5.5m for two Lorries). An entrance width of 6m as shown is likely to be appropriate on the assumption that no large vehicles will need to access the site at this location. However, this could be fully assessed at a later stage by tracking the movement of vehicles into and out of the access. The possible inclusion of car park barriers would also impact upon the entrance design as is discussed further in Section 3.

It is understood from the plan, included within the London Borough of Waltham Forest’s (LBWF) (2012, p.113) Development Management Policies- Proposed Submission document and attached to this note, that Forest Road immediately adjacent to the site entrance is the responsibility of LBWF. Transport for London (TfL) will have an interest in terms of the routing of buses and be keen to ensure that any proposals do not have a detrimental impact on bus journey times.

According to TfL’s London Cycling Design Standards, the shared pedestrian and cycle entrance and path should measure a recommended 3.0m or minimum of 2.0m plus and additional 0.5m for each side that the track is bounded.

3. Car Park Management

It is understood that a charge will be made for the car park and that there is a desire to minimise the costs of administering this. It is noted that a barrier system has been considered; however, this will not be without ongoing costs which are likely to include:

- Collection of cash from meters. Whilst cashless payment methods are increasingly common, it is unlikely to be practical for the car park operation to be completely cashless.
Barriers and meters will require regular maintenance.

This system requires a trained advisor to be on standby at all times of operation should the barriers fail. This would most likely be via intercom to the council or contractor managing the car park.

How disabled motorists will be able to enter free of charge.

The barriers also create potential access issues and depending on the location will cause vehicles to queue on to Forest Road, obstructing the footway, bus lane and other traffic. Similarly if the barriers fail as a vehicle attempts to enter the car park, there would be a need for it to reverse on to Forest Road were the barriers located too close to the site boundary. Guidance included in the Institution of Structural Engineers’ (ISE) (2002) Design Recommendations for Multi-Storey and Underground Car Parks for example advises that:

Efficiency will be maximised if motorists can drive into the car park in a straight line.

A left turn immediately before a barrier can create difficulties for a driver collecting a ticket from within a vehicle (if the barrier operation requires this).

Exit barriers should be a sufficient distance from the junction so as to ensure the barriers can operate efficiently and not be obstructed by queuing vehicles.

Two exit lanes would be advisable to accommodate any vehicles which are unable to progress (for example because of a break down or an invalid ticket) and avoid the exit being blocked for other vehicles.

Payment at stand alone units in exchange for a validated ticket inserted into the barriers would improve the efficiency with which vehicles can exit. The location of such units would need to be factored into the design.

Exit controls may not be necessary if payment is made on entry.

In relation to the final point, consideration could alternatively be given to a barrier on exit only to improve the flow of vehicles into the car park. The entry would need to be treated to prevent exit without payment being made with an example of a mechanism which could be used shown in Figure 1. This option could however be problematic if the car park is full as all drivers entering would have to provide payment in order to leave. Entry barriers are also designed to ensure that the number of vehicles entering does not exceed capacity. Nevertheless, this is not understood to be the motivation for their consideration in the design.

Figure 1: Possible Car Park Entry
Project Centre are not aware of defined distances that barriers should be located from junctions and any recommendation would vary by demand and whether the car park is likely to experience steady or tidal flows (i.e. the majority of car park users arriving and leaving at the same time). Nevertheless, it would be necessary to relocate the barriers currently shown to a location further into the car park. Separate gating or signage may be necessary to encourage visitors to enter the main car park and not to use the area adjacent to the Ranger's building if this is not desired.

With the above in mind it may be worthwhile giving consideration to options that do not require the use of barriers during operational hours with alternatives as follows:

- Treat the car park in the same way as others managed by LBWF (or their appointed contractor) which would require a Traffic Regulation Order (TRO) and appropriate signing in order to be legally enforceable. There would continue to be some administrative costs and arrangements would need to be made with the council's appointed contractors (both enforcement and revenue collection). Internal discussions would also need to be had over the revenue to be directed to the Wetlands Centre.

- Appoint a private parking enforcement contractor. The cost effectiveness of such an approach would need to be investigated further and management costs are likely to vary depending on how much revenue the operator is likely to receive from the car park by means of fines etc.

4. Coach Turning and Drop Off

It is understood that the preference is for the coach turning area and drop off location for other vehicles is to be removed from the designs. In this respect the Client should be aware that:

- The London Plan (2011, p.206) states that leisure developments “should provide appropriate levels of coach parking to suit their individual demand to help reduce congestion and improve visitor safety”. Therefore, if coach parking is not to be provided, it would be advisable to have a strong case to say that large groups will not be arriving by coach. If it is likely that coaches will be used by visitor groups, the absence of on-site provision could be highlighted. It is unlikely that Forest Road in its current form could be used for a coach stand owing to the potential disruption to the bus lane.

- The London Plan (2011, p.201) states that “suitability designed and located designated drop-off points are therefore required” in relation to provision for disabled users. Were there to be potential for people to illegally use the bus stop area for this purpose, the absence of a drop-off area may be of concern. Ideally, a drop off would be as close to the entrance as possible, but as referred to in Project Centre’s original Review of Design Options note, potential conflict with other car park users and site constraints could justify the use of the northern area of the car park/entrance area for this purpose as was originally shown on the preferred design option. In order to overcome this, consideration could be given to how the area adjacent to the retained Ranger’s building could serve both Thames Water’s needs and incorporate a drop-off point. Of course, if a car park management option which did not require the use of barriers could be taken forward, the need for such a drop off area would be lessened, with such vehicles able to use the main car park for this purpose.

- LBWF’s emerging Development Management Policies (2012, p.154) document refers to visitor attractions (including a discussion of Walthamstow Wetlands) and states that these “if successful, result in a large number of visitors, generating significant vehicle movements. New developments should therefore include suitable provision for pick up and drop off points for taxis, minibuses and coaches. Falling this, suitable mitigation measures will need to be provided for via contributions”.

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Ferry Boat Inn

- Vehicle barriers to control access
- Existing vehicle access widened to accommodate a two-way access, would 6m be appropriate?
- Existing area retained
- Existing vehicle access used as Thames Water Operations and Marine Engine House service route.

Existing Ranger’s building retained.
Dear Lynn

**Walthamstow Wetlands – Primary Route Surface**

The concrete surface proposed for the primary routes within the Wetlands path network would provide a suitable surface for a wide range of users accessing the Wetlands, including disabled people. However, unbound compacted aggregate would be a barrier to a wide range of disabled people.

A surface such as concrete would also be distinct in tone and texture from that of the other paths in the network improving legibility and assisting all users in wayfinding, including cyclists. The tone and textural difference between the smooth firm concrete primary routes and the rougher looser gravel surface on the other routes would be of particular benefit to people with vision and cognitive impairments when navigating through the Wetlands.

The London Legacy Development Corporation’s Inclusive Design Standard, Walking Surfaces 05, states “… packed surfaces such as crushed rock, gravel, sand or grit are not suitable” and “paths should contrast visually from their surroundings”

This is backed up by other good practice guidance including BS8300: 2009, Safer Surfaces to Walk On - Reducing the Risk of Slipping, CIRA and Department for Transport Inclusive Mobility, 2002

Service providers and public authorities have an obligation under the terms of the Equality Act 2010, the Act that supersedes the Disability Discrimination Act, to give due consideration to the needs of disabled people when providing services and public functions. The provision of the path network would be considered either a service or a public function and would be covered by the Act.

Funding bodies such as the Heritage Lottery Fund place a high priority on improving accessibility as a condition of funding.

Therefore, I would discourage any change from the principle that the primary routes will be surfaced in concrete.

Yours sincerely

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Reed Bed Creation

As part of the client’s suggested cost saving proposals the imported soil for the reed bed creation was removed. However, this figure was originally included in the cost plan to allow for a sediment contamination risk which would reduce the amount of dredged material which could be used for the reed bed creation.

The last sediment survey, instructed by Thames Water in 2006 and carried out by Strategic Environmental Solutions noted that:

"a proportion of this is classed as hazardous under the Hazardous Waste Regulations 2005 and Landfill Regulations 2005. It is therefore immediately suitable for re use”

Therefore, based on the 2006 survey, if a proportion of the dredged silt required for the reed bed creation is contaminated it may not be able to be used, resulting in a shortfall of material required to fill the gabion. The impact of this would be that not all new reed beds could be created. The EA have indicated that they would like to see increased reed bed provision within the project subject to stage D design and results of sediment survey.

To date we have not been able to quantify the amount of contaminated sediment noted in this report and have therefore included a provisional figure to cover imported material.

Therefore, the current cost plan includes a reduced figure for imported soil to reduce risk to the project.
1 Marine Engine House

A. Kitchen Bin Store: By creating a bin store under the kitchen stair rather than under the kitchen we can save £5k.

B. Viewing Terrace: A reduction in the depth of the viewing terrace from 4m to 3m will reduce the weight and quantity of cantilevering steel structure. The resulting terrace is 30m², still large enough to accommodate a half class of school pupils.

C. Rooflights: Removal of existing rooflights to the Marine Engine House - over WC's, Plant room, Switch room. Rather than replacing and upgrading the existing rooflights we propose removing the existing rooflights, forming a new roof structure, new timber battens and vapour barrier and tiling over.

D. Roof Insulation: Omit the addition of insulation to the existing roof of the Marine Engine House. This is justifiable because the building is listed. However, it will reduce the comfort and energy efficiency of the building for its users, and is therefore a saving of last resort. The café and exhibition space can legitimately be treated as a 'coats-on' environment; however, this should be avoided if possible in the education room.

E. Zinc Roof: Recalculation of roof areas, no performance impact.

F. Glazing to Gables: Reglaze the existing gable window frames in the Triple Engine Room with single glazing.

G. Windows: Reglaze the existing window frames in the Marine Engine House with single glazing, allowance for piecing in new wood (especially cills). This reduces comfort and energy efficiency. However, we propose that the new upstand rooflights above the boiler room should remain double glazed and that the rooflights above the Turbine Room should be replaced with double glazing.

H. Stairs: Reduction of external stair to same specification as internally.

I. Wall Finishes: Reduction of internal brickwork repairs. This means accepting the old industrial spaces 'as found', cracks and all. External brickwork repairs will not be reduced, to ensure the weathering and durability of the structure; the peeling internal décor will be stripped back to the brick structure.

J. Fixtures and Fittings: Omission of lab benches to the education room. Provision in FFE if required.

K. Lift Installation: More detailed design and specification of the platform lift and shaft have reduced the predicted cost.
A. **Kitchen Bin Store**: By creating a bin store under the kitchen stair rather than under the kitchen we can save £5k.

B. **Viewing Terrace**: A reduction in the depth of the viewing terrace from 4m to 3m will reduce the weight and quantity of cantilevering steel structure. The resulting terrace is 3m², still large enough to accommodate a half class of school pupils.

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M. **Fixtures and Fittings**: Omission of lab benches to the education room. Provision in FFE if required.

N. **Lift Installation**: More detailed design and specification of the platform lift and shaft have reduced the predicted cost.
Rangers' building

Minimal refurbishment of existing rangers' building for short term use. Extension of the office area to corner, achieving 6 desk spaces. Re-organisation of stores and permit room to provide male and female changing rooms, accessed externally. Redecorate externally and internally. No provision for roof or window repairs, or for services upgrade.

Upgrading the Rangers' Building is challenging on this budget but we feel it is possible to achieve a reasonable refurbishment of the building that will help get the site up and running. In order to maximise the effect of the proposed budget we propose that all internal finishing is carried out by volunteers (materials provided for in the cost plan).

Note this scheme is not fully DDA compliant, in order to achieve this the ramp would need to be extended and steps leading into the office altered. Existing doors would also have to be surveyed to check that they were wide enough to accommodate a wheelchair.

Note that the Volunteers will not have a staff room, an important resource for the volunteers who will help make the site run.
The above drawing meets the client’s brief for the refurbishment but will cost £69,813
Coppermill Viewing Tower Access Requirements

We have reviewed two options for economical access to the Coppermill Tower: a) accessing from the operational compound via the northwest door; b) accessing over the existing bridge via the southeast door. Accessing via the operational compound is generally unsatisfactory approach as a visitor experience, since the Coppermill remains barely visible for much of the approach, it also blurs the otherwise carefully maintained distinction between public and operations - it was a last resort option. Having reviewed the existing bridge structure in more detail, we have concluded that it can be re-used, with new balustrading, and that this option will be the same order of cost as access via the operational compound. It is therefore the access via the existing bridge that we recommend. Option B is therefore reflected in the cost plan.

We have pared down both the specification and the extent for the stair and viewing platform - steel structure and finish, no intermediate viewing platform/ landing. We have allowed for significant brick repairs on the interior of the tower only, to remedy damage from damp and burrowing spiders. If this is definitively instructed we would recommend more intrusive site investigations and a damp survey of the brickwork.

We do not believe that an option without a lift is defensible. It is contrary to written guidance in relation to planning, building control and HLF:

Extracts from HLF guidance “Making your project Accessible to Disabled People - good practice guidance”:

“If you are awarded an HLF grant you should ensure that you do not discriminate against disabled people and think about any reasonable adjustments you need to make to ensure that your project is accessible by disabled people. We can fund capital works and activities to help you work more effectively with disabled people where an outcome of your project is that ‘more people and a wider range of people will have engaged with heritage’ or where you intend to achieve outcomes for disabled people as individuals.

Under the Equality Act where a physical feature (steps, steep slopes, heights of desks or displays, etc.) makes it impossible or unreasonably difficult for disabled people to make use of your services, you must take reasonable steps to remove, alter or avoid the feature, or provide the service by alternative means. This could involve:

- removing a short flight of steps and replacing it with a slight slope;
- altering a longer set of steps to provide a ramp to one side, in addition to the steps;
- lowering or moving a reception desk;
- providing a lift as well as retaining a staircase to an upper floor; or
- providing images, plans or a virtual tour on a computer of the inaccessible part of an historic building which cannot be altered for conservation reasons.

There is a well-developed process for assessing whether physical features present a barrier to access and how to plan access improvements to overcome these barriers. This involves undertaking an access audit of your building or site, which is a step-by-step assessment of the ease by which disabled people can get to your site and around your facilities.”

We have therefore prepared an additional option, with reused bridge and pared-down specification, but with the lift.

All the above are subject to survey and more detailed design, and planning/listed building advice.
Cost Saving Summary: Architecture-Coppermill Building

Option A: Existing Thames Water access used as access to the viewing tower

Option B: Existing bridge access used as access to the viewing tower