PSS Appendix 6

Design and Access Statement

Staffordshire
County Council

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STAFFORDSHIRE COUNTY COUNCIL

DESIGN AND ACCESS STATEMENT

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1. INTRODUCTION

1.1 Background

Staffordshire County Council is proposing to design, construct and operate, by 2012/13, a 300,000 tonnes per annum (tpa) EfW facility to convert residual waste from the Authorities of Staffordshire (lead), Warwickshire and Walsall, primarily into electricity. Staffordshire County Council intend to secure the proposed EfW facility through procurement under Private Finance Initiative (PFI). The Authority recognises the potential advantages that enhanced resource recovery processes such as combined heat and power (CHP) and additional recycling from residual waste may offer in terms of sustainability.

Defra's Waste Infrastructure Delivery Programme (WIDP) has encouraged authorities entering PFI procurement to consider the merits of obtaining planning permissions themselves where local circumstances are favourable. An approach that allows early entry into a live planning application process is considered to be the only truly effective way of testing planning deliverability. Other authorities have experienced difficulties where key planning applications have been submitted after completion of procurement but have then failed to gain consent. The County Council does not wish to be caught in a situation where it has funding but is not able to deliver a facility on schedule because of site acquisition and planning difficulties. Therefore, the planning permission is being applied for by the Council in parallel with a PFI contract procurement process with the intention that the successful bidder will take forward the construction and operation of the facility. Therefore, some of the more detailed aspects of the design process have not been confirmed at this stage. However, this design and access statement is designed to provide as complete a picture as possible at this stage with the assumption that the external envelope will not change from current plans.

1.2 The Proposed Development

The proposed development is for an EfW facility that will be of a sufficient size to accommodate a range of internal technologies that will be determined by the successful bidder after submission of the planning application. The building envelope needs to enclose all the major workings of the facility and its size will mean it has prominence from a considerable distance; therefore, long range views are important but there are also some key viewpoints in closer proximity that have also been considered.

The actual facility that is built may not be an EfW facility, but employ other waste management technologies, and this is dependant on the outcome of the tendering process. However, an EfW facility is likely to be the most difficult to obtain planning permission for, environmentally the most challenging and would probably represent the largest physical structure. Therefore, a worst case scenario has been assumed. If the successful bidder changes the design of the facility they will need to vary the SCC consent or submit their own application.

The anticipated life span for the waste contract will be for a minimum of 25 years; however, the design life of the building is expected to be longer than this. The site boundary encompasses 3.71 ha. The main part of the building will be 42m tall at the highest point (above the steam generation room) sloping down to 25m at its lowest point. The height is dictated by the height of the boiler at this point and the requirement for the gases to remain in the furnace for a minimum of 2 seconds at a high temperature to avoid the formation of dioxins and furans. The stack will be approximately 80m tall, with the spike projecting from this for approx. 20m. Two

options for the stack are provided for – sloping and vertical. The building is approximately 150m in length.

The design of the main building breaks the building down into component parts, the largest part being the boiler and steam generation hall with the tipping hall to one side and the gas cleaning equipment to the other side. The building has a gentle curved roof, finished as an extensive green roof system. The green roof system will be composed of Sedum or similar mats with selected plug plants that will represent vegetation typical of the area.

The building is orientated so that all 'clean' uses (administration buildings, parking etc.) face the entrance and the rural aspect of the site whilst the more industrial activities, tipping hall, condensers etc. face the industrial estate. The stack (chimney stack) sits separately to the building and is tapered in shape with curved lines reflecting those created by the building close to the site entrance. As such the design of the stack and its base has been carefully considered as this will be a prominent site feature.

2. DEVELOPMENT CONTEXT

2.1 Site Selection

The County Council commenced the site selection process with a list of 59 sites in the south of the County. These were identified from the Industrial Land Survey undertaken bi-annually with the district councils for their availability and potential to provide a site for the 'residual waste management facility'. Consideration was also given to potential end users of any CHP that may be generated by the proposed EfW facility. The sites were assessed under the following headings:

- District/location;
- Planning status;
- Access;
- Adjoining uses;
- Relationship to catchment;
- Availability; and
- Synergies.

A shortlist of 6 areas of search was drawn up and further work was undertaken including contacting land owners to confirm the availability of a 4 hectare (10 acre) site in the timeframe that the project required, and their willingness to sell the land for a waste management facility. This work led to the identification of a preferred site and a willing vendor with the location at Four Ashes Industrial Estate.

The site is 3 km by road from junction 12 of the M6 in a convenient location for access to the A5 and A38. There are less than 10 residential properties along Vicarage Road and the A5 between the site and the A5 and the M6 that will be the designated access for all vehicles other than local deliveries. The designated route is due to a low level railway bridge on Station Road and this will also mean that traffic impacts for the the majority of local residents will be minimised.

The Staffordshire and Worcestershire Canal is located in proximity to the proposed development site, as is the Rugby-Birmingham-Stafford railway line. Ideally, these transport routes would have been utilised to transport the waste to the development site. However, the scale of waste deliveries and the requirement for additional infrastructure (additional railway sidings and the ability to transport the waste from the railway/canal endpoint to the site itself) mean that these options are not feasible for the proposed development at this time.

2.2 The Proposed Development Site

The short-listed site for development is at the end of a cul-de-sac and is located on the edge of a general industrial estate. The industrial estate was established to accommodate developments perceived to be bad neighbours in an area of lower population density where there was already a long established chemical works. The general height of the surrounding buildings does not exceed 10 metres. A chemical works lies approximately 400 metres to the north of the site and includes a number of tall structures, with several chimneys up to approximately 55m metres

in height and slightly lower flare stacks (approx. 50 metres). A Sludge Treatment Works lies approximately 200 metres to the east of the site, with a rising main leading to this along the northern site boundary.

The industrial estate is set in open countryside that is characterised by small fields divided by hedgerows and a belt of trees. The settlement pattern within the surrounding area is relatively dispersed. The closest residential properties are located approximately 150m north west from the site, are positioned along a minor road to the east of the site and are along Straight Mile to the north of the site. There is a row of houses 500 metres to the west between the old railway station and the Wolverhampton Road. About 1 km to the east is the small community of Calf Heath and at a distance of 2 to 3 kilometres are Coven, Brewood and Featherstone. Intervening trees and shrubs restrict views of the proposed EfW facility site from surrounding locations. However, due to the scale of the proposed facility it is anticipated that upper sections of the building, together with the stack will be seen above this vegetation (either from the properties themselves, or the roads that lead to them). The proposed EfW facility will also be seen from elevated positions in the surrounding area; such locations include Saredon Hill and locations on the southern edge of Cannock Chase AONB. Therefore, the design of the facility has been undertaken to minimise these potential impacts and to adopt a curved natural roof rather than a flat traditional roof which would not reflect the skyline.

3. ACCESS ISSUES

All traffic will access the proposed EfW facility from the north via Enterprise Drive, where the present landowner has permission to develop several B1/B2/B8 units. It should be noted that Staffordshire County Council are planning on adopting the access road to the site after construction work is completed. In a wider context, most waste collection vehicles will approach the site from the north, travelling south west along Vicarage Road and Station Road, from the junction between Vicarage Road and the A5, (i.e. only smaller local waste collection vehicles will bring waste to the site via road between the site and A449 due to restrictions imposed by the railway bridge). There will be a traffic routing agreement with the successful bidder to enforce this arrangement. For information, the junction between the A5 and Vicarage Road will be upgraded to facilitate the proposed development.

Access on site has been organised to separate (as far as possible) the access routes for delivery vehicles, staff and visitors. To ensure that access for delivery vehicles, with the use of the associated weighbridge, is kept available for deliveries. An access road encircles the facility to ensure that maintenance and emergency vehicles can operate freely and quickly get to all parts of the site and main building. On the south-west side of the building is an access ramp for the deliveries to enter the tipping hall at a higher level to enable more waste to be stored on site so that the plant can operate over the long Bank Holiday week-ends with minimum deliveries of waste. This has been designed to offer a minimum gradient based on site space availability (1:20 approximately). This will minimise engine noise by the HGVs gaining access to the tipping hall. The tipping hall is elevated to allow for sufficient waste storage space in the waste bunker. Otherwise the bunker would require to be ‘sunk’ an additional 10 m into the ground to achieve the correct waste storage capacity.

10 visitor car parking spaces have been assigned outside the main entrance and visitor reception. Staff car parking is provided underneath the tipping hall to provide secure undercover parking with internal access to work areas. A coach park is provided on the northern boundary (internal access road).

Vehicles collecting bottom ash will enter the bottom ash storage hall from the northern internal access road. Sufficient space has been included in the design for turning circles within the building to ease access routes. Allowing vehicular access to these areas ensures that all loading of potentially ‘dusty’ materials takes place in an enclosed area within the main building envelope. Delivery and collection of materials used in the treatment of combustion gases, and removal of flue gas treatment residue is also enclosed within the main building envelope. For health and safety considerations a one-way system will operate with vehicles entering the silo hall from the west and exiting to the south. Access to workshops and stores is provided on the south east side of the main building (these routes will be two way). Vehicles will also be able to enter the stack gas treatment hall, the steam generation and turbine halls if required for maintenance of the plant within these areas.

Security gates are positioned set back from the main entrance to allow a 40ft (12m) articulated vehicle to stand clear of the highway when the gates are closed. There are two additional barriers on the internal access roads either side of the gatehouse that will be used to restrict vehicles further entering the site should the need arise.

4. DERIVATION OF DESIGN PRINCIPLES AND CONCEPTS

The initial design principles for the site/facility were given to the architect as follows:

- Provision of an EfW facility with a capacity of approximately 300,000 tpa, the dimensions of the required envelope are 150m by 100m and 42m high; the chimney will be in the order of 80m high;
- Office facilities will be required for the site itself, these are to be integrated within the main body of the EfW plant;
- Education/interpretation facilities, again integrated within the main body of the EfW plant, positioned in such a way as to not overlook nearby properties;
- Weighbridge for waste disposal vehicles;
- Segregated access for waste disposal vehicles and employees/visitors to the site i.e. avoid the need for non-waste vehicles to cross the weighbridge;
- It is anticipated that 30 car parking spaces will be required for employees, together with 10 spaces for visitors; and
- Initial plans included provision of a bottom ash handling and storage building but this was later discounted due to the available footprint of the site to ensure the quality of the development and its design was not compromised.

These initial guidelines provided the Architect (Savage and Chadwick) with a clear brief to create a landmark structure with the highest design standards and quality.

4.1 The Design Concept

The main EfW facility building will encompass all operational aspects of the proposed development i.e. combustion of waste, electricity generation, gas cleaning, waste delivery and storage etc. An electricity substation, air cooled condensers, a gatehouse and diesel storage will also be provided as ancillary structures on-site. The position and orientation of the building recognises the relative position and proximity of sensitive receptors to minimise any potential adverse impacts e.g. position the potentially noisy plant as far away from surrounding residential properties as possible and orientate the plant to minimise potential visual impacts and noise impacts (position of the air cooled condensing fans).

A site layout plan showing the different processes taking place within the building envelope is shown in the figures relating to chapter 4 of the ES. As far as possible (and within reasonable cost) the proposed development will embrace the principles of sustainable development. A number of options were explored during design evolution including a wind turbine on the stack and the use of photovoltaic cells on the building walls during the design evolution. However, it was found that the deliverability in terms of time and the potential for them to make a meaningful contribution to plant operation tied to their cost meant they were scoped out of further consideration at this stage but the bidders will be invited to consider including these and other sustainable initiatives in their bids if they can incorporate them at a competitive price and this could enhance their bid in any evaluation. Materials proposed as part of the development will be sourced to maximise the use

of re-used or recycled products. This will include the surfacing of roads, car parks, footpaths etc. and in the fabric of the buildings itself.

The facility design also includes an education facility, which will be used to brief visitors and will be a valuable resource for use by schools and other educational institutions as well as other community groups.

The development of such a large structure will mean it will be visible over a wide area and therefore the outline and colour was identified as being particularly important. This is why elements such as the curved roof structure and green roof were introduced to facilitate minimising long range views.

5. THE DESIGN SOLUTION

5.1 Initial Design Options

The surrounding topography on three sides of the site comprises farmland and is gently undulating and enclosed by hedgerows. Further visual enclosure is provided by the frequent hedgerow trees and block of woodland. This vegetation, together with the landform creates a setting with smooth flowing lines to the horizon. The architect's initial response to this landscape was to design a building that complemented these curved lines rather than hard angular edges, which would, in their opinion, be at odds with the site's context. The architect also considered that the building – although of significant size – should grow from the landscape rather than appearing to be built on top of it and the incorporation of a sinuous roofline would complement this approach.

Initially the architect (Savage and Chadwick) developed two design options that were suitable for the site and context. Both design solutions for the site orientated the facility in such a way that the main building mass was positioned closer to the Four Ashes Industrial Estate. Greater flexibility in building height at the opposite end of the facility allowed the building to appear as though it emerges from the landscape. This overall approach built on the initial site analysis and will create a complementary design solution when seen from near and middle distance locations.

It is recognised that distant views towards the site will be obtained from certain elevated locations within the surrounding area, including Cannock Chase AONB. In such instances it was recognised that the main building would be seen against the landscape and the use of materials are critical to the design solution. Therefore it was considered that a 'living' roof would be appropriate for both design solutions, avoiding sun reflection and assisting with the integration of the building with its context.

It was recognised from the outset that the stack forms a critical part of a successful design solution. It will form a tall structure within this landscape that will establish a new landmark. Therefore the design of this element should both create interest on its own by its form and detail while also reflecting and complementing the design solution for the building itself. Two design options for the stack are being put forward.

Two options were initially put forward for the design of the main building and they are summarised below.

5.1.1 Option 1

Option 1 breaks the building down into sections - the largest volume being the boiler and steam generation hall.

The largest volume has a gentle curved roof which is finished as a green roof. All other smaller volumes compliment this shape and flow around it.

The building is orientated so that all 'clean' uses – admin, parking etc face the entrance whilst the tipping hall, condensers etc are positioned towards the industrial estate.

The stack sits separately to the building and is tapered in shape with curved lines reflecting those created by the building.

5.1.2 Option 2

Option 2 enclosed the whole volume by a single curved form. The roof is extended some distance beyond the building at the lower end to reinforce the concept of the building 'growing' from the landscape and the extended 'green' roof allows the building to appear from a distance as a mound – lessening its visual impact considerably.

The stack – although separate from the building is enveloped within the extended roof and reflects the same shapes as Option 1.

5.2 Preferred Design Option

A number of issues were investigated when appraising the two design options, including:

- Potential to meet bidder's requirements;
- Functional flexibility with respect to prospective technology solutions;
- Short and long range views;
- Risks associated with development timescales and design surety; and
- Construction and maintenance costs.

Option 1 was the preferred option for the following reasons:

- Whilst Option 2 offered an iconic structure there were concerns that it involved a more complicated construction requirement that could impact on the time and cost for its delivery.
- Option 2 also posed concern for some of the potential bidders as it was more of an 'unknown' and therefore, there were concerns it could have inhibited waste management companies from bidding for the project or if they had submitted bids they would have included insignificant contingencies to cover the perceived increased risk;
- If changes were required by the successful bidder to the facility layout then option 1 offered greater flexibility;

5.2.1 Stack Design

Initially the stack was located in the centre of the building piercing the roof. This offered few design opportunities to unify the building and stack design.

Consequently as the design progressed discussions led to the stack being moved to the west elevation of the building where it became detached and a helical shroud was introduced to reflect the curves of the building design along with an elongated spire at the head to visually emphasise the slenderness of the structure.

Functional development of the design required the stack arrangement to be adjusted as the flues carrying the cleaned gasses to the stack, could not cross the APC (Air Pollution Control) silo hall at low level as this would impede vehicle movements. As a result a horizontal stack route was incorporated which takes the flues outside the building, and places them within plinth as the number of bends in

the flue needed to be minimised; however, the physical constraints of the site prevented the stack location to the west elevation as planned.

Two alternatives were proposed. The first is to locate the stack to the opposite east elevation nearer the site entrance. The second is to place it on the north elevation. The latter alternative would require the roof to be pierced due to the overhang and sloping elevation and would also place increased loads on the main building structure, should and angled stack design be chosen. For these reasons the stack has been positioned at the north-east most corner of the main building, near to the site entrance. Because of it's prominence in the landscape and location next to the site entrance (indeed it will be the first structure that people visiting the site will see); a striking design was felt to be essential.

There are two options being proposed for the design of the stack (chimney), one vertical and one angled. Both designs will contain two 2.1m diameter stacks to discharge cleaned emission gases into the atmosphere, and both designs will have a discharge point that is 80m above ground level. For both designs the stack is as much a feature of the architectural solution as the building and its prominence is a positive aspect of the design. The vertical design is tapered in shape with curved lines reflecting those created by the building and employs a helix structure and spike feature on top of the stack. The angled option is topped by a quill shaped feature, with a base structure to provide support to the stack. The angled option reflects the splayed form of the walls whist the helical option reflects the curved geometry of the roof – both therefore respond to the main building design in different ways.

5.2.2 The Main Building

The main part of the building will be 42m tall at its highest point (above the steam generation room). This is dictated by the height of the boiler at this point and is based on a vertical boiler configuration. The stack will be approximately 80m tall, with the spire projecting from this for approx. 21m, and the quill option projecting for 7m. The building is approximately 150m in length and 100m at its widest point.

The EfW process will be entirely contained within the new building envelope, which will be divided into a number of zones, or halls, housing different elements of the process. The plant will operate with two lines running at an average design throughput of 20 tonnes per hour (tph). Waste will be incinerated at a minimum temperature of 850^{o}C with the released heat generating superheated steam. The steam is then fed to a condensing turbo-generator, producing approximately 29MW of electricity. (The plant itself will use about 4.5 MW of electricity when it is operating.)

The building will incorporate a number of environmental controls such as negative pressure within the tipping hall and waste bunker to prevent dust and odorous emissions from escaping. The air that is extracted to achieve this will be used as part of the combustion process so that all odour is destroyed. Stack gases will undergo extensive treatments to ensure that emissions from the facility do not exceed levels agreed with the Environment Agency and will not cause any health risk or detriment to European designated ecologically important sites on Cannock Chase. SUDS principles are adopted in the design of the site drainage and a Flood Risk Assessment has been carried out as the site is adjacent to flood zone 3. A green roof will provide biodiversity value, slow down water drainage from the large roof area, and also have aesthetic benefits. A full Environmental Impact Assessment (EIA) has been submitted with the planning application.

5.2.3 Layout

The site area of approximately 3.71 hectares is able to accommodate all aspects of the proposed development, whilst avoiding ecologically sensitive areas. The layout makes the most of the site, with the plant designed and positioned in such a way to make the most of the wider site. A landscape strategy has been prepared for the undeveloped parts of the site; this has been designed in such a way to create maximise biodiversity where appropriate, and provide an attractive, distinctive appearance.

As mentioned, SuDS principals have been incorporated in the site layout design. Percolation testing confirmed that infiltration could not be used so the scheme uses pipe-work and swales to carry water from the roof and the other hard standing areas to two attenuation ponds. Water is then discharged from these to the existing ditches on the eastern and southern boundaries

The site design layout makes a clear distinction between the operational waste management areas of the site and the admin/visitor areas. Access to these areas is quickly separated with site visitors directed toward a pedestrian friendly access to external landscaped amenity areas. Waste Management traffic is directed via an entirely separate route to the west of the main building to the weighbridges, and then on to the tipping hall ramp.

The building itself is orientated on a NW/SE axis. There are several reasons for this:

(a) The larger ‘lead in’ to the tipping hall allows waste traffic to queue if required;

(b) The condensers and other low profile external functional equipment are able to be located on the less visible side of the site; and

(c) The diagonal orientation allows the functional length of the building to be accommodated whilst allowing space around the operational area for a suitable landscape strategy.

The site will be enclosed by a continuous fence line and can be made secure without compromising any ecological or wildlife considerations. The fence-line is set forward in places to maintain a corridor for wildlife to circumnavigate the site. Where appropriate, the fencing will be aligned with existing and proposed landscape features to assist with its integration e.g. hedgerows and new planting.

5.2.4 Scale

The proposed EfW is a significant structure but the curved from the roof has been designed to enable the eye to be drawn away from viewing it as a large ‘block’ building.

In terms of size, a smaller facility could potentially have advantages in terms of less land-take and lower traffic volumes, the benefits would not necessarily occur on a pro-rata basis. For example, an application for a 180,000tpa EfW facility has recently been made by Veolia at Rufford in Nottinghamshire and the main EfW building for this facility covers approximately the same area (~1.3Ha) as that proposed at Four Ashes. The overall site area at Rufford is larger at approximately 5.4Ha (the Four Ashes site covers 3.71Ha). Given that smaller capacity plants can require similar land areas as larger plants a smaller facility would not necessarily make any of the other alternative sites any more attractive, particularly as many

were rejected in relation to issues other than their size (e.g. designations, proximity to sensitive receptors, environmental implications and land availability issues etc.).

Consideration was also given to whether the overall height of the facility could be lowered by excavating and sinking the entire building into the ground. This was not deemed practical due to cost considerations, the requirement to transport and dispose of large amounts of material of-site (and the associated increase in construction traffic), the potential for the mobilisation of contamination in the groundwater and the effect extensive dewatering might have on groundwater flows and groundwater management. It was decided that only excavating and burying the waste bunker, rather then the entire building, is practical to reduce the size of the facility and appropriate mitigation to protect against mobilisation of contaminants and dewatering issues for just this part of the building are covered in Chapter 12 – of the accompanying Environmental Statement.

Glass windows have been included in the east wall to allow views through to the main boiler hall. The size and complexity of the internal engineering is thus expressed and celebrated rather than hidden.

The main reception and entrance have been designed to present a key feature for visitors with immediate lift and staircase access and ground floor lobby access to a meeting/lecture room where groups of people can be first introduced to the facility.

Key details have been included such as:

- Splayed plinth treatment at the bottom of the facility;
- Splayed walls clad with large format composite cladding panels;
- Large overhanging eaves; and
- A natural living roof.

5.2.5 Landscape Strategy

The proposed landscape strategy for the site provides biodiversity benefits to the operational site whilst creating an attractive setting, softening the appearance of the lower level of the facility. New planting will include suitable native species and shrubs from local stock, where appropriate, to provide screening and habitat areas for wildlife. Native trees planted around the site boundary will provide nesting and foraging areas for birds.

The landscape plan has been designed to improve connectivity between the exiting habitats within the site. Maintaining the hedge line along the eastern boundary, leaving the bunded area along the south and providing additional tree planting near the site entrance will maintain linear strips of vegetation that can be used by bats and provide corridors for other wildlife to move around the site. This connectivity will be strengthened by planting adjacent to the Site of Biological Importance (SBI) to the west of the site, and the existing hedgerow/scrub along the eastern boundary. The species mix for this planting will include native black poplar *Populus nigra* stocked from local sources as this species is listed on the Staffordshire local Biodiversity Action Plan (LBAP). Other species such as dog rose *Rosa canina*, guelder rose *Viburnum opulus*, elder *Sambucus nigra* and hawthorn *Crataegus monogyna* will be planted to provide fruit for birds.

A species rich grass seed mix will be sown in all the areas between the internal access roads and site boundary. This will include species such as Yorkshire fog

Holcus lanatus, red fescue *Festuca rubra*, false oat-grass *Arrhenatherum elatius*, common vetch *Vicia sativa* and bird's foot trefoil *Lotus corniculatus*, that have been identifies as part of the Phase 1 habitat survey, summarised in Chapter 10 - Ecology. These grasses will also be sown on verges between the access road and building to the south west and south east of the main building.

The land between the building and the internal access road on the northern side of the building will be planted more formally, but using native species in a simple way that complements that architectural solution for the building. The areas will be sown with the same species rich grassland as applied elsewhere within the site. These areas will also be planted with a line of more mature, silver birch trees *Betula Pendula* planted at regular intervals to add maturity and create immediate effect.

There will be two surface water attenuation ponds (see Section 4.10.3), provided as part of the surface water drainage design. These will incorporate shallow edges with planting of emergent plant species to provide a suitable habitat that can be used by amphibians and other wildlife. Species of rushes, and sedges and Marsh Marigold *Caltha palustris* will be planted in these areas.

The small pond on the western boundary will also be improved by opening up the tree cover around it. As this pond straddles the site boundary this will be done in conjunction with improving the SBI. It is proposed to produce a management plan for this area of woodland as it currently lacks any form of direct management. Removing and coppicing certain trees will open up areas of woodland and allow a shrub and herb layer to develop which will further enhance species diversity.

The design of the main EfW facility building will incorporate an extensive green roof system, on the main roof surfaces of the EfW facility. The green roof system is likely to be composed of Sedum mats with selected plug plants that will represent typical vegetation of the area. Further details of this are provided in Chapter 10 Ecology

A detailed Landscaping plan will be submitted by the successful bidder under the Private Finance Initiative (PFI) procurement, for approval prior to commencement of the works

The successful bidder will be required to establish a site management regime to ensure the management of the SBI and tree lined ditch on the eastern edge is maintained, and that the on site planting is able to become established. This is likely to include thinning of tree cover, where necessary, occasional scrub clearance and mowing to maintain the grassland areas. It is anticipated that any mowing will only take place on an infrequent basis and once the flowering season is over.

6. CONCLUSION

The design of the proposed EfW facility has gone through a number of iterations from two initial options offering an iconic and more traditional perspective. Stakeholder consultation and key questions over the deliverability and cost then led to the more traditional building being chosen retaining the option of two contrasting stack designs in the planning application – one traditional, the second more iconic.

The key benefits of the proposed design solution can be summarised as follows:

- The curved form of the building reflects the gentle curve of the surrounding topography and landscape, mitigates the visual impact of the building and places it in the context of its wider surroundings.
- The selected layout fits well on the available space and incorporates landscape proposals that maximise biodiversity opportunities as well as complementing the sustainable drainage strategy;
- Separate access for visitors, employees and deliveries will mitigate any site health and safety risks;
- All operations are housed within one building so reducing the likelihood of noise and air emissions;
- Flexibility is offered to house a number of internal technical workings;
- The living roof structure reduces negative impact in terms of drainage and loss of ecological area; and
- The living roof helps minimise visual impact at longer distances.