

City Design Manager's Comments

Comments in bold represent issues of concern or requests for more information. **As currently proposed, in my professional opinion, although considerable progress has been made since the earlier scheme, I do not think that the development is acceptable on the grounds of being of inappropriate scale, massing, height, poor architectural and landscape quality, and the negative visual impact on local amenity, and the skyline of the city.**

Proposal:

Pre-app for the proposed construction and operation of a biomass fuelled electricity generating plant.

Relevant policies/guidance:

Local Plan Review 2006 SDP 1, SDP 9, Core Strategy 2010 CS 1, CS 13, City Centre Action Plan Preferred Approach 2012 Policy 14 Design, City Centre Master Plan 2012 (public consultation draft), CABE/EH Tall Buildings Guidance 2007, City Centre Development Design Guide 2004, Skyline Strategy (officer guidance) 2006, Revised Draft Overarching National Policy Statement for Energy (EN-1) and Revised Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)

Amount

The proposal is for a 100 MW net output biomass plant able to provide electricity for up to 200,000 homes and capable of providing heat for a district heating system, though this is not currently part of the proposals.

Changes to the February 2011 proposals

The proposals have been revised significantly since the initial scheme was proposed in February 2011. The revised layout moves the Primary Development Area 140 m south, with its boundary almost equidistant between the quayside and the northern boundary of port land defined by the railway lines. The proposals seek to: maximise distances between key plant structures and nearby residential development; achieve greater visual permeability and more open views through the centre of the development; concentrate taller structures to the west in order to minimise visual impact on views from residential streets to the north; reduction in height of principle buildings; the boiler house 70 to 60 m, the main biomass fuel store from 47 to 42 m, the auxiliary fuel store from 39 to 30.5 m and the fuel delivery building from 25 to 20 m. The building footprints have also been reduced where possible (by over 2000 m²), including the boiler house and fuel delivery building. Further work has been carried out to provide greater certainty on the final design. The layout and form of the buildings have been amended and three different architectural treatments considered, which have been consulted on, asking members of the public to rank in order of preference, the response from which will inform the final design approach. Helix propose to use 'Limits of Deviation' to define zones where buildings/plant will be sited that give some flexibility for change as the design develops.

National Policy

The Overarching National Policy Statement for Energy (EN-1) part 4.5 states that "applying "good design" to energy projects should produce sustainable infrastructure sensitive to place" and "the IPC needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be." It also states that the applicant should "demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation" and "the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area." Paragraph 4.5.4 of EN-1 requires that the design process and how the design has evolved should be evident in the proposal. Paragraph 5.3.15 states that "Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design." The National Policy Statement for Renewable Energy Infrastructure (EN-3) states that "proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity". It is understood that the policies make it clear that consent can be given when all technical details and therefore the final design have not been finalised and therefore the landscape and visual impact assessment is carried out on a worst case scenario.

Although the proposals have improved considerably in design terms, in this worst case scenario, it is not considered that the proposals meet the requirements for good design that is sufficiently sensitive to place and there is insufficient evidence of the design process that has led to the proposed options.

Landscape and Visual Impact Assessment (LVIA)

A visit to the site and adjacent residential development highlights the rich variety of views over a largely industrial landscape including shipping movements, quayside structures and activity, and container, car and scrap metal storage, but include a stark contrast beyond of the more natural landscape of the New Forest. The long distance views from the residential development and streets in Millbrook across the site to the south west over to the New Forest are significant. These are characterised by the continuous dark green horizontal but slightly undulating continuous strip of trees broken occasionally by vertical punctuations of finer detail of pylons and cranes in the middle distance and the two chimneys of Marchwood Power Station and the dome of Marchwood Incinerator and the spire of church St John the Apostle, Main Road in Marchwood, in the longer distance. This spire is on the same view corridor set up by the railway footbridge over the A33 to the Millbrook Station. Views from within the site are also of interest, with a dominant line of trees to the northwest punctuated by the pylons and Holy Trinity Church, Millbrook and to the north east by the strong character of gable fronted terraced houses that line the A33 and the tall spire of Christ Church Freemantle on Paynes Road, and a further line of trees punctuated by pylons that leads the eye to the east. To the south views of the water are restricted by the piles of scrap metal currently stored on the quayside, however views of upper decks, masts and funnels of ships moored here can be seen above this.

The submitted LVIA focuses generally on short, medium and long distance views of the proposed development but does not specifically identify the significance of views of the New Forest across the site and other landscape features such as the church spire of St John the Apostle in Marchwood. It also does not consider the views outward from within the site nor the elevated views afforded from cruise liner passengers. The study also does not sufficiently characterise the existing landscape in such a way that general design principles can be drawn out and used to progress the design process.

Scale

The revised proposals represents a considerably smaller development overall than that submitted in 2011. The availability of a new site further into the port land and further away from residential development also helps to reduce the visual impact of the proposals. However the visual impact of the proposals is still significant in terms of its impact on the 'gateway' approach to the city along the A33 and the local residential communities. An area of particular concern is also the impact on views from cruise passengers berthed at Berth 106, the Mayflower Cruise Terminal, less than 400 m away from the site, as they could be up 50/60 m above sea level (the largest cruise liner Allure of the Seas is 65m high above sea level, equivalent to a 20 storey building in height), and gain a much more open view of the proposed development site at a similar height to the boiler house.

The proposed height of buildings and structures on the site is a significant consideration in considering the visual impact of the proposals. The Local Plan Review indicates that a tall building is one of 5 storeys or more (SDP 9 paragraph 2.59) which would be of about 15 m. The context is also important in this respect and the site currently has no significant development and is used partially for vehicle storage and partially for stockpiling rock salt for de-icing roads in the winter, forming mounds about 15m high, though the adjoining site Pentalver Container Storage Area often stores containers up to six number in height (8'6" or 2.6m each) of about 15.6m high. Research indicates that it would appear that ISO containers can be stacked up to 12 in height (31.1m) though it would appear in Southampton containers are only stacked up to six high.

With reference to the Local Plan Review policy and the current context it is necessary to consider what would be considered a tall building on this site. The Technical Consultation document considers the visual impact assessment a worst case scenario of heights; this applies to the height of the following buildings/structure of a number of structures:

where heights have been given up to a maximum height of:

- steam turbine building – up to 25 m (previously 21 m)
- storage/workshop /control building – 10m (previously 22m)
- main biomass fuel store building x 2 – up to 35m (previously 47m) inc conveyor 42.2m
- fuel delivery building – up to 20 m (previously 25m)
- boiler house – up to 60m (previously 70m)
- stack assembly – up to 100m

- cooling services building - no longer required (previously 15m)
- fly ash silo – 19m (previously 15m)
- flue handling buildings and conveyors (new) up to 12 m
- air cooled condensers – up to 30m

Other tall buildings given fixed heights:

- water storage tanks x 2 – 6m (previously 15m)
- flue gas treatment chemical bund and storage tanks x 4 - 15m
- auxiliary biomass fuel stores and ass. conveyors x 1 – up to 30.5m plus conveyor up to 34.5m (previously x 2 - 39m increasing to 43m for conveyor)
- cooling - hybrid tower - 22m.

Even if the maximum height of the some of the structures listed can be reduced there are many structures where the height cannot be reduced, representing tall buildings of the equivalent storey height of between 5 and 10 storeys (based on 3m per storey) increasing potentially up to 11/12 storeys for the main biomass fuel store and 20 storeys for the boiler house. The structures and compounds on the site have a footprint of around 34,500 sq m. Given that many of these buildings have an equivalent storey height of between 5 and 20 storeys this still represents a comparatively massive scale of development when compared to the existing city centre and the proposed economic regeneration of the city centre as outlined in the City Centre Master Plan.

The proposed boiler house is a tall building comparable in height and form to the several dispersed and isolated residential towers at Redbridge Towers, Sturminster House, Shirley Towers and Millbrook Towers (at 73m Southampton's tallest tower) on the west side of the city; Shirley Towers being the closest. However these towers are isolated, unlike the boiler house, which will be surrounded by other tall buildings and will make the development appear considerably more bulky in massing. The giant floating crane 'Canute' is believed to be about 47m tall, currently moored near the site, is of a similar scale, but again dwarfed by the bulk of these buildings. The only other tall buildings in this area of the western port land are the Solent Flour Mills, believed to be about 36m high.

The visual impact assessment identifies that the majority of short to medium distance views of the proposed development, in particular those from Foundry Lane, Paynes Road, Freemantle Lake Park, the elevated west bound carriageway of the A33, Regents Park Road and the banks of the River Test at Marchwood, have a moderate negative potential impact and even with the proposed mitigation using architectural treatment and in some cases proposed landscaping, the residual impact is still moderate or minor negative, thus demonstrating that the mass of the development cannot be mitigated against and raises the question as to the appropriateness of the location so close to such a large residential conurbation.

However, in comparison to the previously prepared photomontages the new ones do demonstrate that the proposed development has significantly reduced in size and visual impact (due to its relocation further from residential areas and

rearrangement of buildings), but it is still a relatively massive scale of development. The revised proposals, being lower in height, do have a much more reduced impact on the view from Mayflower Park and the proposed Royal Pier Waterfront development, though it must be borne in mind that these views are from ground level and future development may include tall buildings in these locations and locations stretching up towards Central Station, many of these future developments would have good views towards the site. The proposals do not have significant impact on longer distance views from the city centre at Havelock Road and the Itchen Bridge, and the variety of view points to the north and west on the River Test and in the New Forest.

The case is argued that the magnitude of the cumulative impact of the proposals is low due to the existing strong industrial character, however that character relies heavily on the relatively small scale repetition of form such as duo pitched sheds, vehicle storage, container stacks, dockside cranes and pylons and not tall bulky buildings. Marchwood Incinerator and Power Station are the only buildings in the vicinity that are of a similar scale, mass and height but these are relatively much further away from the Millbrook residential communities so as not to be so visually impacted on.

The proposed reduction in size of the development and new location have made a significant positive impact on the daylight and sunlight assessment to the extent the assessment does not indicate anything of concern.

As raised previously, given the scale of the development, albeit smaller than the previous scheme, and still a tightly planned site offering no space in which to plant landscape to soften the visual impact of the proposals (see landscaping below), one does question whether the need is totally justified and whether a smaller output and therefore smaller plant would be more appropriate given the significant negative visual impact the physical dimensions of the plant would create. There is also no consideration of the 'place making' within the site. There should be an opportunity for a visitor centre on the site and therefore an appropriate arrival experience for visitors and members of the public with good urban design and landscaping, that should give greater legibility to the development when viewed from outside the site and from the water/cruise liners.

The scale of development is many times greater than the small scale predominantly 2 storey residential development that lies just to the north, but also the scale of current port industries, such as container and vehicle storage, and the proposals will create a significant negative impact on the skyline particularly when viewed from relatively short distances of the residential development and along the approach to and from the city centre along the A33. This is particularly important when considering the negative impression it may give businesses and people that we are trying to attract to invest, work and live in the city. The proposals must therefore be exemplary in their design credentials.

Landscaping (comments from Kay Brown and Mark Ellison)

The principle of off-site planting to help mitigate the visual impact is agreed though it would be preferable to have some additional onsite

planting to soften the visual impact of the development much closer to the buildings and structures and to help integrate the development more with the wider landscape. There is considerable doubt about the achievability of much of the landscaping currently proposed for reasons due to objections by highway engineers and objections by the Parks and Open spaces team on grounds of maintenance costs, especially for trees in the central reservation, although this may possibly be overcome by Section 106 payments. See comments below on proposed specification.

Now that the site has been moved further into the port land there is potential to carry out a much more successful and more substantial mitigation scheme by allocating a suitably wide strip of land along the northern port boundary that can be planted with the appropriate sized forest trees and tree pits, and have adequate space for proper maintenance. This could also serve as a linear park, including an opportunity to begin to implement a coastal path (where it is currently missing) and the western commuter cycle route, if appropriate access can be made at either end linking with the pedestrian bridge over the A33 and railway and Dock Gate 10 in the east. This would be a much more appropriate scale of mitigation in relation to the scale and visual impact of the proposed development and a significant benefit to the local community and community of Southampton to help compensate for the negative visual impact of the development. Much more of a feature could be made of the pedestrian bridge linking this to a viewing platform and information point as well as access to the linear park and Millbrook Station. It also has strong synergies with the general policies and design guidance set out in the Core Strategy, City Centre Action Plan and City Centre Master Plan to improve public access to the waterfront, encourage cycling and develop a greener and more biodiverse environment.

There is potential for green walls to be introduced to parts of the building. These can be achieved in a way which would minimise maintenance costs. For example by training climbers up the sides of the building by means of purpose built wires running vertically up the building. This is a well established technique and much cheaper to maintain than the type of green wall used on the south side of OGS. However consideration needs to be given to the visual impact of this as this will result in a very dark facade where used and coupled with a north facing location may be visually overbearing as a result. A more pragmatic approach might be to use this approach to break up the mass of the proposed development.

Specification notes and stock detail.

- We have a rule that stocks sizes no smaller than 14-16cms should be used in or near the public realm to reduce the risk of the trees being snapped off by vandals. The proposed 12-14 cm are smaller than this.
- The latest advice is that trees in hard areas should be provided with 5m³ of soil volume. If this is not possible then certainly more than the 1m³ supplied should be specified. The tree pits are proposed with only 1 m³ of soil, well below the recommended amount.
- The narrow width of the Sycamore planting pits in the central reservation (500mm) is of concern. There is a strong risk that this could, at least in

the short and medium term lead to the trees being vulnerable to wind throw, with the attendant implications for safety. In addition these trees would be expensive for our colleagues in Open spaces to maintain because of the access problems. For these reasons it would be preferable that the scheme did not rely on these, although would be happy to accept them if the Tree team are happy to adopt them.

- We require a much more detailed specification, as the detail is developed further.

Species choices

- Italian alder is not (as suggested in the text) a native species. However it does have one important advantage: it is tolerant of dry conditions, which in this context is important. I am therefore happy with it, subject to it being a large enough species to do the job. See table below.
- Whilst the Prunus Avium would create a dramatic springtime feature it isn't a very long lived tree and the Open spaces team may well have to replace them all in 50 years time. If they are happy with that then I'm happy for them to be used.
- Here is a table of ultimate tree heights for each of the species specified. Please note that these heights are for ideal conditions and are unlikely to be reached in this context, especially as this is a relatively exposed site. As a **very** rough rule of thumb you might say that trees in a reasonable area of grass might reach 2/3rds to 3/4s of their optimum height. Trees planted in hard areas will probably only reach between 1/2 to 2/3rds of optimum height depending on the soil rooting area they are given.

Field Maple	9m
Syc.	30m
Italian alder	15m
Silver Birch	18m
Wild Cherry	12m
Small leaved lime	30m

Hopefully this table will help you/us come to a conclusion about to what degree the applicant is able to mitigate the views through tree planting.

- Some of these species will be seed raised and therefore subject to too much variation for plating in avenues. Therefore cultivars should be specified;
- It is worth noting that of all the trees specified all except the Sycamore have a relatively upright habit. Hence in winter, when we'll be relying on the volume of woody material to screen the view; the sycamore with its wider spread is likely to perform much better. However it should be used with caution in areas where cars are parked because of the sticky honey dew excreted by feeding aphids.
- Some of the areas of woodland type planting look large enough on plan for this to be achieved, but considerable level changes to some areas mean that retaining walls will have to be built in some locations to facilitate a flat enough surface for trees to establish without risk of wind

throw. Again however there is likely to be an issue with the maintenance of the retaining wall.

Appearance

Buildings and structures of this scale, height and mass in this prominent 'city gateway' location will require a memorable and exemplary architectural solution, one that the local community can be proud of.

Examples of exceptional infrastructure projects that have become memorable structures symbolic of a local community or place are the Thames Barrier and bridges such as the Pont de Normandie and the Millau Viaduct in France (designed by British architect Norman Foster). Infrastructure projects of this scale should be beautiful architectural structures in their own right, ones that the architectural solution is the engineering solution – there is no need to 'dress up' the proposal and try to hide it if the quality of architecture is so good we want to see it, 'own' it and be proud of it.

Many infrastructure structures now have visitor centres (EDF are submitting plans for visitor centres at all of its nuclear power plants) and this is one way of engaging the public and educating them on why we need these mega structures. Bridges all over the world have attracted attention as 'wonders of the world', used as back drops for holiday snap shots, and have established visitors centres or information points where people can get a closer look and learn about the structure and what it does. Both of these facilities would significantly enhance the public opinion by giving something back to the local community

The three architectural solutions are presented as a 'dressing up exercise' and do not yet demonstrate architecture that is sensitive to place. This should not be necessary because the form and function of the engineering proposal should be driving the architectural solution. The site is in a gateway location situated alongside the busiest approach into the city and so the buildings/structures will become a landmark and should be symbolic of the Council's aspirations and approach to high quality design and its sustainability credentials. As with the Thames Barrier the interplay between the architect and the engineer should result in a memorable architectural form. The one that is closest to the correct solution in my view is the 'High-Tech' option which keeps to a simple form and mass, however the introduction of strong curved and vertical forms and contrasting elements to the cladding of the sheds is in conflict with the character of the landscape which is characterised by strong horizontal lines (the railway, the quay side, the low lying sheds, the tree line of the New Forest) punctuated by a finer level of detail in vertical structures that transparently display their structure (the pylons and quayside cranes). The angled gantries are alien to the landscape and visually conflict with the strong horizontal character and should be downplayed visually to reduce their impact. These are big clues into how the architectural solution should develop, and in this respect the horizontal lines expressed on the cladding of the Marine option work well. There are examples where high quality architecture has produced visually interesting solutions such as the Marchwood Incinerator (designed by leading infrastructure architect Jean Robert Mazaud) which demonstrates how a simple approach to the structural form and colour treatment can successfully minimise the visual impact of a large structure. An imaginative approach to the design of chimney stacks has been taken near Heathrow, just off the M4, at the Lakeside Energy from Waste Incinerator; here

three chimneys have been wrapped in an open stainless steel spiral structure that distracts from the utilitarian form of the chimneys. The choice of materials and colour is also important but in my view red is an aggressive colour that is inappropriate given the public resistance to the development. A more neutral palette of colours that reduces the apparent size of the tall structures when set against a predominantly grey sky would be appropriate. This might be accented by colours characteristic of the port or maritime location and a feature lighting scheme could be used to dramatically light up the development at night, celebrating a memorable architectural form.