

**Planning Application with Navigation Implications:  
Generation Park**  
Report by Planning Officer

**Summary:** A planning application has been submitted for the redevelopment of the Utilities Site in Norwich. The development is known as Generation Park. This report sets out the details of the application, explains which matters have been applied for in Outline and in Full and identifies which aspects of the development the Broads Authority will be responsible for determining.

Issues are set out in Section 5. Members' views are sought on the navigation aspects of the proposal.

## **1 Background**

- 1.1 The proposed development of Generation Park is being developed by NPH (Norwich) LLP, a company founded in 2009 to deliver a sustainable energy solution for Norwich and to regenerate the Utilities Site.
- 1.2 The development would be focused around a Community Energy Centre and would include the construction of residential and commercial units on the site as well as new educational and research facilities. The proposed development would also include areas of recreational and amenity open space and would include mooring provision along the northern bank of the River Wensum.
- 1.3 The application is a Hybrid Application comprising a mixture of Detailed and Outline elements. The site falls broadly equally within the administrative areas of Norwich City Council and the Broads Authority Executive Area, with a small length of the proposed access road falling into South Norfolk Council's area.

## **2 The Planning Application Process**

- 2.1 The application has been the subject of pre-application discussions with Planning and Waterway Officers from the Broads Authority and Planning Officers at Norwich City Council. Members of the Planning Committee also had presentations from the developers at Planning Committee Meetings on 6 March 2015 and 26 June 2015. A site visit, which included a boat tour of the river frontage of the site, was undertaken by Planning Committee Members and a representative from the Navigation Committee on 2 October 2015.

### **3 The Planning Application**

- 3.1 Comments are now sought from the Navigation Committee on the planning application submitted to the Broads Authority.
- 3.2 The site itself is situated on the northern bank of the River Wensum, directly opposite its confluence with the River Yare and Whitlingham Country Park. The Norwich to Yarmouth railway line runs along the northern boundary of the site, with a small area of land to the north of the railway line, accessed off Cremorne Lane, also being included in the development site. The western end of the site is defined by the existing site entrance off Hardy Road. The existing railway bridge across the River Wensum is situated immediately to the western end of the site. The eastern end of the site tapers off into an overgrown finger of land situated between the river and the railway line. Thorpe Hamlet is situated to the north of the site, the Deal Ground site is situated to the south of the site with Trowse beyond that and Carey's Meadow is to the northeast of the site.
- 3.3 The whole site covers an area of approximately 12 ha of brownfield land. The site is currently occupied by the UK Power Network (UKPN) substation and grid connection compound. A pair of 72.5m high pylons is situated on the site. Outside the UKPN compound remnants of industrial infrastructure remain including large areas of hardstanding, single storey outbuildings, fencing and a redundant gasometer scheduled for demolition. Immediately to the north of the gasometer is a 26m high telecoms mast. There are also one and two storey buildings which house the Train Operating Company and National Grid operations. Two inlets, once used for cooling water for the power stations have been cut into the site. Both are sheet piled. The riverside frontage of the site is sheet piled for approximately three quarters of its length, with the eastern end of the site being replaced by a more natural bank where planting merges with the water.

### **4 Proposed Development.**

- 4.1 The principle access to the site would be via a new access road, with full cycle and pedestrian provision, leading from 'The Street' in Trowse. The access road would route north through the May Gurney site before crossing the River Yare on a new clear span bridge. The access road would then continue north through the Deal Ground site before crossing the Wensum into the Generation Park site via a newly constructed bridge. The majority of this road, bar the most northerly section approaching the proposed Wensum bridge, already benefits from extant detailed planning permissions by virtue of the Deal Ground consents.
- 4.2 It is proposed to replace the existing vehicular bridge that links the Utilities site to Cremorne Lane with a cycle and pedestrian bridge. This access point into the site would be known as the Northern Gateway. The level crossing over the Norwich-Yarmouth rail line would not be affected by the proposal.

- 4.3 There would be no vehicular access to the Generation Park site from Hardy Road with the exception of emergency vehicles. Hardy Road would also provide access to the Train Operating Company depot.
- 4.4 The Community Energy Facility would include a biomass combined heat and power (CHP) plant that would generate renewable energy through the combustion of approximately 256,000 tonnes of straw pellets per annum. It would have an installed electricity generating capacity of 49.9 Megawatts (MW). It would also deliver 12.3MW of heat via a District Heating Network (DHN) to a range of local commercial, institutional and residential energy users. In addition, heat and power would be provided to all of the scheme components within the proposed development itself.
- 4.5 It is proposed that 'planning permission' for the DHN would be by way of a bespoke Local Development Order prepared by Norwich City Council. The proposed development would also include the provision of a substation allowing grid connection from the Community Energy Centre to the local electricity distribution network.
- 4.6 The table below lists the various components of the scheme, confirms the type of application submitted, and identifies the Authority responsible for determining the application:

Element	Detail or Outline Application	Determining Authority
<b>Community Energy Centre</b>		
Renewable Energy Centre	Detail	Norwich City
Energy Research Centre	Detail	Norwich City
District Heating Network Centre	Detail	Norwich City
Straw Pellet Offloading Facility (including the new railway sidings)	Detail	Norwich City
Straw Pellet Storage Silos and associated conveyors	Detail	Norwich City
<b>Residential Development</b>		
Arrivals Square Student Accommodation (3 blocks 435 units)	Detail	Norwich City
Northern Gateway Student Accommodation (2 blocks 282 units)	Outline	Broads Authority
Market Residential (80 units)	Outline	Broads Authority
Affordable Residential (40 units)	Outline	Broads Authority
<b>Educational and Community Facilities</b>		
Research Centre	Outline	Norwich City
Education Centre	Outline	Broads Authority
<b>Commercial Facilities</b>		
Data Centre	Outline	Norwich City
Arrivals Square (including associated	Detail	Norwich City

Neighbourhood Units)		
Train Operating Company Office, Training Building and Car Park	Outline	Norwich City
<b>Access and Car Parking Provision</b>		
Vehicular Bridge over the River Wensum	Detail	Broads Authority
New Cremorne Lane pedestrian overbridge	Outline	Broads Authority
Car parking	Detail or Outline depending on the scheme element to be served	Norwich City and Broads Authority
Vehicular, cyclist and pedestrian road from the new Wensum bridge (linking to the Utilities site) through the May Gurney and Deal Ground sites, including a new bridge over the River Yare, and linking into The Street.	Detail	South Norfolk and Norwich City Council
<b>Ancillary Infrastructure</b>		
Britvic private wire and water supply linkages	Detail	Norwich City
Concept Landscape Design	Detail but with some substantial elements to be approved under condition	Norwich City and Broads Authority
Concept surface water drainage scheme	Detail but with some substantial elements to be approved under condition	Norwich City and Broads Authority
Boat moorings and associated river usage infrastructure	Zone 1 in Detail Zone 2 and 3 in Outline	Broads Authority

## 5 Navigation Issues

- 5.1 The development proposed for Generation Park includes the construction of the new bridge over the River Wensum together with proposals for water use including short and long term moorings, de-masting moorings, pontoons, berths for passenger boats, and a slipway and canoe launch/ landing. The application is supported by a Waterspace Plan which looks at all the possibilities for maximising the use of the river frontage and river and ensures that the use of the water is successfully integrated into the overall design strategy for the site.
- 5.2 As the Navigation Authority, the Broads Authority requires that planning applications with navigation implications are subject to consultation with the Navigation Committee. The aspects of the proposed development that are

considered to be of interest to the Navigation Committee are outlined following.

### 5.3 Construction of the Bridge

- 5.3.1 The design and positioning of the bridge over the River Wensum, to provide the main access into the site, has been the subject of lengthy pre-application discussions between the bridge designers and Officers at the Broads Authority.
- 5.3.2 The bridge would be a steel box girder construction and would accommodate a shared surface of varying width used by pedestrians, vehicles and cyclists. The main bridge deck would taper in at the centre and at its narrowest point at the shared surface would be 6m wide widening out at each end of the bridge to 10.6m. There would also be an area of cantilevered timber decking that would extend out from the main bridge deck to provide a segregated pedestrian/cycle zone and seating area. The bridge soffit would be set at +5.65 AOD and Mean High Water Springs has been agreed at +1.01AOD.
- 5.3.3 The bridge deck would be supported at either end by concrete abutment structures approximately 1.5m in depth. These abutment structures would accommodate the hydraulic support blocks and jack cylinders that would secure the bridge in its normal position when closed. The bridge would comprise of two spans of equal length supported by a central pier located in the River Wensum. The pier would be elliptical in shape in order to reduce impacts on the flow of water around the structure. The central supporting structure would accommodate a 'slew bearing' that allows the bridge to swing open through 90 degrees. The bridge would be rotated by multiple electric motors located around the slew bearing. It would be opened and closed from the north bank by a trained operator and advance notice would be required for any craft requiring the bridge to be opened.
- 5.3.4 The design of the bridge has taken account of comments made by Officers during pre-application discussions. This has resulted in the supporting plinth being moved closer to the Generation Park frontage, which would result in less of an encroachment into the navigable width of the river when the bridge is in the open position, and leaving a greater width available than at the adjacent Trowse Rail Bridge.
- 5.3.5 The fendering of the bridge includes the installation of timber driven pile fenders, extending to 2m above water level, around the plinth structure. It also includes fendering with horizontal timbers along the length and around both ends of the bridge when it is in the open position, which will reduce the risk of high bridged vessels going under the ends of the open structure.
- 5.3.6 In terms of the construction of the bridge, it would be constructed remotely and lifted into place once the foundations, abutments and central supporting column were completed. It is likely that the main component parts of the bridge structure would be transported to the construction compound by road and would be fabricated in the Deal Ground construction compound. The

application states that works in the river would be limited and that navigation along the River Wensum would be possible for the vast majority of the construction period. Navigation would be restricted as the bridge is lifted and fixed into position.

- 5.3.7 The planning application received also includes a proposal for a fixed bridge as an alternative to the swing bridge option. The design of the bridge would be exactly the same as for the swing bridge but without the mechanism required to move the bridge.

#### 5.4 Provision of Moorings

- 5.4.1 The scheme for this site includes the provision of de-masting moorings, short and long term moorings and berths for passenger boats and river taxis.

- 5.4.2 Within Zone 1 of the river frontage, which is the area at the western end of the site there would be 75m of moorings available for boats with a beam of up to 5.15m, which would include approximately 65m of proposed visitor (short term) moorings and the berth for the Information/Wardens boat. There would also be a 20m length of mooring for passenger boats/water taxis and a 25m length of mooring suitable for boats with a beam up to 5.44m for demasting would also be provided from this pontoon. Given the height of the piling along this stretch of the river it is necessary for these moorings to be accessed from pontoons. The possibility of reducing the height of the piling along this stretch of the river, and therefore removing the need for pontoons, was explored but was found to be impractical given the complexities of the underground infrastructure in this area that would need to be moved and the costs involved. However, given the width of the river in this area it is possible for the pontoon and the moorings to be accommodated, with the beam of the boats restricted as suggested, within 25% of the width of the river. The pontoons would be Intermarine floating pontoons attached via runners to the river wall with hinged ramps to rise and fall with variations in water level. Safety measures would be incorporated into the pontoons and existing river walls. Safety chains/ropes and escape ladders would be provided along the river walls where there are no pontoons. Additionally rotten timbers and protruding fixings would be removed from the walls along the entire site to reduce such hazards to vessels and canoeists.

- 5.4.3 Within Zone 2 of the river frontage, which is the central section, it would be possible for the piling height to be reduced and therefore the moorings to be provided in this section would be accessed directly from the river bank, without the need for pontoons. Approximately 74m of berthing is proposed in this area which would be used for visitor berths for the 4-5 months main cruising season and for longer term berths for the 7-8 months out of the main season. This would be suitable for boats with a beam of up to 5.7m or 6.2m depending on the exact location on the frontage. A passenger boat berth would be located at the eastern end of this mooring run. The Carrow Yacht Club moorings are located on the opposite side of the river to the proposed mooring provision. However the combined projection into the river of the boats moored alongside the river wall on the Generation Park Bank, including

the slightly wider passenger boats, and the yacht club moorings opposite would not exceed 25% of the total river width.

- 5.4.4 Within Zone 3 of the site's river frontage it is proposed to include a slipway which would serve the emergency services, as they have requested, and also residents and students for launching canoes and small craft. The main development allows for canoe storage within the student housing blocks. The river wall/piling would be removed to create the slipway at this point and terraced steps have therefore been included in the scheme to provide an interesting feature and an opportunity for the public to get down to the water level. The steps would also facilitate canoe launch and landing.
- 5.4.5 Within this Zone it was originally intended to provide a run of approximately 150m of leisure moorings east of the slipway. However it was concluded that it was not possible to drop the height of the piling along this stretch of the river due to the detrimental effect this would have on the landscape and ecology of this area. It was also not considered desirable to have boats moored right up to the piling as there would be issues with overhanging branches getting caught in boat rigging. The possibility of providing the moorings from pontoons was investigated. However there is insufficient river width along this stretch of the river to accommodate the pontoons and moored boats along the Generation Park frontage and the 24hr moorings on the opposite bank and to achieve the required 75% navigable width of the river. The loss of more than 25% of the navigable width of the river in this location is not considered to be acceptable because it is near the confluence of the River Wensum and River Yare and there are a large number of boat movements into and out of the Yare and in a downstream direction originating from the various rowing and canoe clubs in the area and Carrow Yacht Club. Therefore this length of mooring has now been dropped from the scheme.

## 5.5 Marina

- 5.5.1 In accordance with both strategic objectives and an identified local need for moorings the Waterspace Plan, submitted in support of this application, fully explored the possibility of providing a marina within the Generation Park development to maximise the delivery of moorings in this area. The Plan states that there are a number of significant constraints which severely compromise the creation of a marina on this site. The constraints include: major underground public utility services running across the site; significant disposal costs of contaminated soil from the site; location of existing UKPN compound on the site; road access to a new marina would cut across traffic area of riverside public realm; location of marina entrance would need careful consideration to minimise potential for conflict between manoeuvring boats and other river users. Having considered all the possible options for the creation of a marina on this site, in detail, the Waterspace Plan concluded that whilst a new marina at the Generation Park site would go some way to meeting demand and providing scope for off-channel moorings, unfortunately the site has very significant constraints, which means that any marina provided would not be ideal in terms of location or design, would not deliver a

significant number of additional berths and would be excessively costly to construct.

## 5.6 Dredging

- 5.6.1 The hydrographic survey information that is available for the stretch of the river along the Generation Park frontage indicates that the water depth below Mean Low Water is between 0.5 and 1m alongside some of the sections of river wall where pontoons and moorings are proposed. The drafts of the boats that are likely to use the moorings would be between 0.7 and 1.2m. The dredging typically undertaken by the Broads Authority would be limited to the navigation channel in the middle of the river leaving a 3m margin to river banks. It would therefore be necessary for dredging to be carried out in places to enable the creation of the riverside moorings, particularly where the depth of 0.5m – 1m extends up to approximately 7m into the channel on the westernmost section of the proposed moorings and also in a few places along the central section. The dredging method and disposal of the silt would be determined by the condition of the sediment. Whilst there is no data available relating specifically to Generation Park, work that has previously been carried out by the Broads Authority in this area has indicated that mercury is likely to be present in the sediment that will need to be disposed of at the Postwick Tip.

## 6 **Conclusions**

- 6.1 The application has various elements that have the potential to have implications for the navigation of this stretch of the river.
- 6.2 Member's views are requested.

Background papers: BA/2015/0225/FUL

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Broads Plan Objectives: None

Appendices: None