THE FAVERSHAM SOCIETY
FOUNDED 1962
FLEUR DE LIS HERITAGE CENTRE
ESTABLISHED 1977

Harold Goodwin, Chair, 10-13 Preston Street, Faversham, ME13 8NS

13th July 2018

The Faversham Society's response to Phase 2 of the statutory consultation.

There are three parts to our response.

A. A list of our major current concerns
B. A background document giving more grounds for our concerns#
C. A list of outstanding questions which we would like to see answered

A. Our major current concerns

The Faversham Society enthusiastically supports the development of all forms of renewable energy. We recognise the importance of using wind, solar and tidal technologies for power generation to reduce the use of carbon fuels and meet the UK commitments to reduce levels of greenhouse gasses. However, we have grave concerns about the negative environmental and amenity impact of the solar power station being proposed at Cleve Hill and across the surrounding marshes. There are alternative brownfield sites available, and distributed generation is both possible and more desirable.

Our major concerns are listed here:

1. Unprecedented Scale – What is being proposed on the outskirts of our town is an extremely large industrial development, as big if not now bigger, than Faversham itself. A development of this scale cannot fail to have a profound negative effect on the environment and reduce the economic and amenity value to those both living in and using the area. We will need to be convinced by the economic and environmental logic of building a single site at this scale. If the logic for constructing a plant of this size is so convincing why are there not similar developments anywhere else in Europe and beyond? Moreover, this is an experimental development. We understand that it is 15 times the size of the largest UK solar farm and we are told that neither the developer nor the builder has attempted a solar installation on this scale before.

During the consultation process, there have been many changes to the proposal. Plans for the battery installation are still unclear.

We are disquieted that our marshes are being used for this experiment. We are also worried that if the Cleve Hill development is allowed on this far-eastern edge of our Borough, it will create a precedent that over time, will allow marshland to the west to be sacrificed until the whole of Swale's north Kent coastline becomes an industrialised zone.

2. Implications of Site Enlargement – there has been a significant increase in the size of the proposed site during the consultation period. This has been achieved by developers including a Site of Special Scientific Interest and the seawall, the latter to enable the developer to negotiate with the Environment Agency in order to mitigate the risk of managed retreat on the operator's assets. (panels, batteries and other plant) This has enabled the developer to now claim that the panels will only cover 55% of the site (as if this in some way reduces their impact) and to include the extra land and the SSSI as part of their calculations concerning the benefit to the environment that they suggest the power station will create. This raises serious issues regarding responsibilities and wider governance.

3. Flood Risk

These marshes are a protective floodplain for Faversham. The seawall is currently the responsibility of the Environment Agency and therefore under democratic control. If the Agency were to delegate responsibility to the operators of the site for the flood defences, they would be able to raise the height of the wall at will in order to protect their assets. This lack of public accountability for such important actions is unacceptable. We also have concerns about the impact of insulating such a large area of land from inundation – most particularly on increasing the flood risk in Faversham town - already prone to flooding. The marsh area has long been a coastal floodplain which protects Faversham.

Proper quantitative modelling of the long-term risks of the flooding of our town and surrounding villages is required.

In addition, it is our understanding that a large battery area (apparently the size of 15 football pitches) that developers intend to construct, will be built so as to block the existing drainage ditch which separates Graveney and Cleve Marshes. Moreover, the whole area is to be surrounded by a high earth bund. This will increase the risk of flash-flooding across and more particularly beyond the site in the downpours that are occurring with increasing frequency.

4. The governance of the SSSI

We are equally disquieted about the fact that because of the recent enlargement of the site the future of an important SSSI will be put into the hands of a private sector developer. We know that the way that SSSIs are managed is critical and without oversight, by a public body we are not

confident that the incentives of the developer and operator would ensure the long-term protection of the site. The SSSI appears to have been included to assist the developer in increasing the biodiversity of the site merely by acquiring land already managed for diversity.

5. **The Height of the Solar Panels**

The proposed site was originally tidal saltings and is a Category 3a floodplain. Rising sea levels and more violent weather events both threaten the site. As a consequence, if construction were to go ahead, the developer has said the panels need to be 'around' 4 metres high, just short of the height of a double-decker bus.[1] This would be a severe detriment to the amenity value of the marshes to all those local people and visitors who use them.

The industrial landscape created by the panels will also be completely visible from viewpoints such as Graveney Hill and Graveney Church, from Oare village, from the Isle of Sheppey and from all vantage points around Estuary View just to the south of Whitstable. On the lower ground, the Society questions the developer's assertion that the panels will not be visible above the sea wall. This hides the panels' effect on the amenity value of the Saxon Shore Way, shortly to become part of the Coastal Path, because this path runs atop the wall, not on the shoreline below. Even so, the panels will be visible above the seawall when walking towards Nagden Cottages from Faversham on the east side of the Creek and from Faversham to Hollow Shore on the west side of Faversham Creek - including the views from Oare Nature Reserve at Harty Ferry.

6. **Archaeology**

The Historic Environment Desk Based Assessment commissioned by the developer reveals that the site and its immediate environs make an important contribution to the historical and cultural setting of the town and that the creation of a large power station - albeit solar - would ignore Faversham's historical importance and compromise the setting of the town and its neighbouring villages to the north, Graveney and Goodnestone. We have evidence of medieval saltings and of a historically significant duck shoot that would be obliterated by the panels. We have seen no assessment of the damage to the archaeology of the area covered by the site.

7. **Noise and Disruption**

If developers are forced to halt work over each summer's bird nesting season and to avoid disturbing overwintering birds, it is likely that the work will be

[1] The new London Routemaster is 4.38m high

spread over perhaps three or four years. This means that for residents close to the site and those living on or using the roads leading to it, there will be unacceptable noise and disturbance caused by construction traffic to and from the site over a long period.

The Faversham Society is also concerned about the level of disruption that will continue during the normal running of the power station. Although there is some technical detail, we have seen little intelligible analysis about the cumulative level of noise generated by the inverters, transformers, battery packs and other elements of the energy production process.

Neither is there a convincing presentation about the level of, noise, light and air quality pollution caused during the construction phase.

8. **Access and Traffic**

This is a very large site that would not only be covered with new solar installations but would also require substantial works to provide the roads, new ditches and the electrical plant - including a substantial compound for battery storage. The Faversham Society is concerned that the roads to the site, in particular, Head Hill Road and Seasalter Road are not suitable for the weight and frequency of traffic required to transport such a high volume of materials and equipment to the site. We are unclear about future responsibilities for road maintenance, repair and general restitution.

The developers have provided no information about the level of traffic to be expected nor any modelling on the effect that this will have not only on roads leading to and from the site but those in the wider area such as the M2, the A2 and the Thanet Way. Society members know that it only takes a little extra traffic or a small accident to reduce the entire local road network to a standstill.

9. **Wildlife**

Although the noise and disturbance is a cause of anxiety for residents and the loss of amenity value distressing for those all who currently use the marshes, there is a much more serious and detrimental impact on wildlife. Construction of roads and excavation of ditches, the creation of culverts, clearing of the ground by removing plants and topsoil and installation of equipment would result in the whole site being unavailable as nesting habitat for ground-nesting birds nor as a feeding /foraging habitat for birds, bats and other animals and insects over a long period.

The site forms part of the North Kent Marshes Environmentally Sensitive Area. It is also directly adjacent to the Swale Ramsar site which is designated because it has an important assemblage of bird and plant species. The site will also affect the Swale Special Protection Area and the Swale Site of Special Scientific Interest, the South Swale Nature Reserve and the Swale Estuary Marine Conservation Area and on the opposite side of Faversham Creek, the Oare Marshes Nature Reserve managed by the Kent Wildlife Trust.

The Faversham Society's initial analysis suggests there should be particular concerns about the following species:

Brent geese, lapwing and golden plover	Natural England has identified the marshes as important wintering sites for these species.
Avocet, Wigeon, Dunlin, Redshank, Shelduck, Teal, Little Egret, Grey Plover, Knot, Ruff, Black Tailed Godwit, Bar Tailed Godwit, Curlew, Short Eared Owls, Hobby and Peregrine Falcons	These marshes represent for these species nationally significant habitats that would be detrimental to the populations if lost. The birds use many parts of the site, not only the western end. There are breeding birds such as skylarks, dunnocks and yellow wagtails together with reed buntings, oystercatcher and lapwings nesting all over the site. Most of these are ground-nesting birds and rely on insects found in the existing vegetation to feed their young.
Marsh Harriers	Functionally linked to Ramsar site for breeding
Water Voles and reptiles	Natural England has pointed to the need to address the impact on these *protected species*
Rare Invertebrates	The marshes provide habitat for over 30 species of rare and scarce species of species of beetle, bugs, flies, bees and plant hoppers which are either of regional or national significance
Bats Species	Nine species of bat are present on the marsh including soprano pipistrelles, common pipistrelles, noctules and Daubenton's bats

The developers propose to preserve and improve a small part of the marsh at the eastern end of the site specifically for Brent geese, lapwing and golden plover. (It is worth noting that this includes the additional area within the SSSI to the east of the site proposed in the original scheme.) The Faversham Society considers that this gesture would not compensate for the loss of wildlife habitat across the whole site and cannot be considered mitigation for this wider destruction of habitat.

The Society notes that a recent European Court of Justice ruling regarding Habitats Regulation Assessment suggests that a full 'appropriate assessment' will have to be completed to prove that there is no harm to the Swale Special

Protection Area beyond reasonable scientific doubt for the scheme to be acceptable.

10. Soil and Soil Erosion

Developers propose to create what they have called ‘grazing land’ under the panels with a mix of grasses and wildflower species. They propose the grazing of sheep. Even if this were to prove possible, such plans are less than adequate compensation for the loss of such a large, grazing marsh so productive of wildlife.

The solar panels will prevent the soil from absorbing rainwater and will concentrate the flows so that rainwater will cascade onto the ground, causing soil erosions and general degradation. Moreover, the Society has yet to be assured that the ground beneath the panels will have sufficient sunlight to permit much vegetation and therefore animal life beneath the canopy of panels. We have seen no evidence to allay our fear that a ‘desert’ will be created over a very large area. Comparison with other solar panel sites is of little relevance because of the size, height and density of panels proposed for Cleve Hill.

11. Landscape, Amenity and Economic Value

The site forms part of a Kent Area of High Landscape Value and a Swale Area of High Landscape Value. The site is visible from long distances including Wraik Hill on the A299 at Whitstable, from Estuary View, from Boughton Hill on the A2 and from Oare village to the west of Faversham Creek – all which have extensive views encompassing the whole marsh, grazing land, fruit farms and orchards. It is an area of high amenity and economic value. However, the developer’s intentions will completely change this view of open arable and wildlife marshland to a landscape with column after parallel column of dark panels stretching into the distance from almost every point of view.

This extent of this change is hidden because of the photograph viewpoints that the developers have chosen to include in their promotional material for the public to assess the full impact of the proposal. Those images chosen by the developers suggest that the panels will only be seen when people are close to them rather than showing the more important views of the middle and long distance. We believe that a 3D computer model allowing the public to ‘see’ the site from all viewpoints would allow a more realistic assessment of impact.

The size of the site and the multiple points from which the panels and other site infrastructure will be visible will change the character of what has been a huge, open area of grazing and arable marshland into a heavily industrialized and developed landscape. This will create a loss of inestimable value to visitors and to local people, not just in the immediate future but for generations.

This will have a knock-on effect on the local economy. The Faversham and Graveney Marshes 'brand' attracts a large number of visitors – whether interested in history, marine life, birds or general recreational walking - to this part of Swale. Although developers assert that for Kent the impact will be negligible, we have seen no analysis of the short and longer economic impact the development will have on Faversham and the businesses that support and service our visitors.

12. Footpaths

The entire footpath through the site from Nagden Cottage to the seawall near Castle Coote, would – if the development goes ahead as proposed - run between lines of solar panels 4 metres high making it impossible for walkers to see over them. Any additional permissive paths provided as part of the development would have similarly stark industrial views.

As we have noted above , the Saxon Shore Way runs along the top of the seawall, and so any walker from Faversham to Seasalter would start by looking along the parallel ranks of solar panels and then as they turn east looking over row after row of panels stretching east to west to the back of the marsh. The monotony would only be relieved as walkers passed gaps for the spine road and the drainage ditches. At the eastern end of the site, walkers' next view would be the battery compound and sub-station across the grazing marsh. Walking the Saxon Shore Way from the Seasalter Road end, there would be views of the sub-station and other works and across the marsh towards the solar panels extending to the sea wall. New security fencing and surveillance is also expected to be installed along all footpaths which would add to the unsightliness and serve to intensify the hostile industrialised atmosphere across the marshes. The character of all of these well established and much-used footpaths that are part of the Saxon Shore Way would be changed beyond recognition. On a more detailed point, we would want to be assured that the footpath across the site from Nagden to Castle Coote would remain open during the construction phase.

The Faversham Society considers that the detrimental impact on the amenity of users of the footpaths both through and around the Cleve Hill Power Station would be unacceptable both in the short term during building works and in the longer term once the panels were connected to the grid and battery storage was installed.

13. Identification and Mitigation of Long-Term Risks

There are two questions about which the Society, local elected representatives and in time the wider public will need more assurance. Our first concern is the business assumptions on which the development is based. As we have seen recently with the Swansea Bay Tidal Lagoon scheme, huge

and developments like the Cleve Hill Power Station are highly dependent on the demand for and the pricing of electricity over the long term. We believe the assumptions made by the developers about this should be made public. We want to know how sensitive those assumptions are to national and global shifts in the energy market over what timescale.

We also want to know what account developers have made for the growing acceptance that the days of old national grid-based approaches to energy production and supply are numbered because they will be supplanted by the much more cost-effective and environmentally 'green', distributed generation,

This vulnerability to national and global events over the long term leads to our second major concern. If the site ceases to be economically viable – and most especially if the developer's company fails and goes into administration - who will be responsible for decommissioning the plant and restoring the marshes to their original condition? Without explicit reassurances and guarantees from developers and planning authorities, the risk of having a very large and redundant industrial plant covering such a large area would be unacceptable to the Faversham Society, to the public at large and most likely to their elected representatives.

We are concerned that there has been no information about the public health and security risks associated with the development. We understand it is proposed to construct the largest battery in the world covering ground equal to that of 15 football pitches. We would like to know about the environmental risks of fire and/or explosion and what arrangements will be made to mitigate the effects. It may surprise developers to learn that the people of Faversham and their elected representatives are particularly sensitive to the risk of large industrial explosions and the social, economic and environmental damage they wreak.

14. Alternatives Sites

There are numerous alternative brownfield sites – even in this corner of the country. Kingsnorth and the Hoo Peninsular are obvious candidates. The Faversham Society needs clarification about why the Cleve Hill site has been chosen above others. If – as has widely been rumoured – it is attractive to developers solely because of the spare capacity on an existing and underused national grid connection, we do not believe that this is sufficient justification for the devastation which such a large - albeit solar - power station will create.

We also understand that although there can be economies of scale with other forms of energy production, this is not the case for solar energy since solar

technology (panels and batteries) can be scaled incrementally, having numbers of smaller sites would deliver much the same returns. We would like to see the differences in long-term viability between a far less intrusive multi-site model and the single site devastation that is being proposed for Cleve Hill and the surrounding marshes.

15. Losses and Benefits

As we have made clear, this unprecedentedly large solar power station will have a profound negative impact on the people that live in Faversham and the surrounding villages. Although it is these local people who will suffer the losses if this development goes ahead, it appears that as currently conceived, it provides no direct benefit for them either in the short or long term.

That lack of attention to what in other large development schemes would be known as 'planning gain', demonstrates the lack of regard or concern that developers and builders of the Cleve Hill solar power station have for the interests of the people of Faversham and the surrounding villages.

B. Background Paper

Cleve Hill Solar Farm – Consultation on pre-submission Development Control Order July 2018

General

This scheme is the pre-submission version of the Development Control Order and has been sent to Swale Borough Council as a consultee. Hence, all material can be viewed on both the Cleve Hill Solar Farm website and on the Swale Borough Council website under reference 18/503041. Swale Borough Council has no powers to determine the application because the scheme is for a Nationally Significant Infrastructure Project. This power falls to the Planning Inspectorate on behalf of the Secretary of State for DBEIS. Following the end of the current consultation on 13th July, the full documentation for the application together with any representations on this consultation and all consultation from the first consultation held last autumn will be submitted to the Planning Inspectorate.

The site has been increased in area compared with the original scheme. It now takes in part of the Site of Special Scientific Interest to the east of the site near to Seasalter Road and extends further towards the sea along the full length of the northern side to include the sea wall. This is so that the developers can negotiate directly with the Environment Agency about the management of the coastal defences in the longer term to avoid the Environment Agency removing or reducing the flood protection from this part of the coast and so that they can have a larger area over which to provide mitigation from the loss of overwintering habitat on the site for birds. The two areas increasing the size of the site have enabled the developer to argue that the solar panels will only occupy 55% of the site area.

The site

The National Planning Policy Framework (NPPF) advises at paragraph 100: 'Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere'.

The site is in a high-risk area for flooding, being in flood zone 3a. Therefore, the Sequential Test and the Exception Test have been applied. At paragraph 101 of the NPPF advises: 'The aim of the Sequential Test is to steer new development to areas with the lowest probability of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding. The Strategic Flood Risk Assessment will provide the basis for applying this test. A sequential approach should be used in areas known to be at risk from any form of flooding.'

The site is vulnerable to flooding by the sea and is defended from flooding at present by the sea wall. The developers state that they have considered the need for a connection to the National Grid and they have found no other site in Kent that is suitable that is within flood zones 1 or 2. The Faversham Society considers that part of the reason they have found this to be the case is that the proposal is so large that only a site in this location can satisfy the requirement.

Having concluded that the development cannot be located in a zone with a lower probability of flooding because there is no site big enough with a connection to the National Grid, the second test for the development to pass is the Exception Test.

The NPPF advises: 'For the Exception Test to be passed: it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.'

In this case, the developers argue that the scheme is nationally necessary because of the amount of essential infrastructure it provides and that because of this it has a wider sustainability benefit outweighs the flood risk. In order to achieve this, the solar farm has been designed so that the non-critical elements of the development are flood resilient (the solar panels raised up above the flood level) and the critical elements are flood resistant (surrounded by a bund) and there are evacuation plans for all personnel at construction and operation stages. Further, there would not be any increase in flood risk elsewhere as a result of the development. The Faversham Society comments that because the site is in a flood zone with parts of the site vulnerable to a 1 in 100 year flood the design of the solar farm includes panels that will have to be raised so that the base of each panel is above ground level to the extent that it avoids the flood level. Hence the overall height of the panels would be significantly higher than could be the case elsewhere to the detriment of the wider environment of the site. The panels would be 3-4 metres high and could be more if raised above the flood level.

Archaeology

The Historic Environment Desk Based Assessment explains that within 1km of the site there are three conservation areas and one grade I listed building (Graveney Church) Within 5km of the site there are 534 Grade II listed buildings, 34 Grade II* listed buildings and 10 Grade I listed buildings, 15 conservation areas and 13 scheduled monuments. The Assessment sets out all archaeological finds within 1km of the site from pre-Roman to the 20th century. This includes sheepfolds and sheep-washes from when the site was used partly for grazing and wildfowl decoys for trapping wild birds dating from the 18th and 19th century, the site of the medieval port of Faversham at Thorn Creek including the remains of timber quays and finds of high significance from World War II including the remains of a German aircraft from the last battle on British soil in 1940. Finally, the marshes themselves are artificial creations called 'innings', created in the 12th-15th centuries and superficially mask an as yet uninvestigated pre-medieval landscape which was dry land until overtaken by rises in relative sea level.

The Faversham Society comments that this shows that the site and its immediate environs make an important contribution to the historical and cultural setting of the town and that the creation of a large power generating site would compromise its historical importance and the setting of the town and its neighbouring villages to the north, Graveney and Goodnestone.

Construction

It is expected that the construction of the site would take place over a period of 18 months to two years starting from 2021. There are breeding birds on and in the immediate vicinity of the site and the developers have been advised by Natural England that they should not carry out construction during the breeding season from May to August. They were also advised that because of wintering birds to avoid visual or noise disturbance and use less disturbing methods of construction in winter. This represents substantial constraints to the period when works could take place.

The works that are proposed include digging 700 metres of a new drainage ditch, construction of a series of new culverts across the site across existing drainage ditches and alterations to existing culverts along the north and south edges of the site. It is also proposed to add a major track running from the site of the existing Cleve Hill sub-station to the seawall near Nagden and other tracks from east to west and from north to south within site to service the site. It is also proposed to build a new sub-station/site compound including battery storage of electricity close to the existing sub-station for the wind farm. There is also the installation of all the supporting frameworks for the solar panels and installation of the panels themselves.

Tables set out noise levels caused by construction equipment for receptor points at adjacent residential properties including at Nagden Cottages, Warehouse, Coney Banks and Crown Cottages. With the breaks over the summers for bird nesting, it is likely that the works will take up parts of three years. There is also concern about working in the winter because of wintering birds on the land that are part of the Swale Ramsar Assemblage. This means that for residents close to the site, there will be noise and disturbance over a long period to the detriment of amenity.

The level of noise and disturbance is a problem for residents but is much more serious for wildlife. Construction of roads and excavation of ditches, the creation of culverts, clearing of the ground by removing plants and topsoil and installation of equipment would result in the whole site being unavailable as nesting habitat for ground nesting birds and feeding /foraging habitat for birds, bats and other animals and insects over a long period. Once complete, it is likely that new vegetation would not properly establish itself for at least three years. The impact of this is discussed in more detail in respect of particular species and the overall impact on the Statutory designations and local designated land that directly abuts the site.

Construction traffic

The Construction Traffic Management Plan (CTMP) only addresses the first phase of the project, the construction phase, and does not cover the operation of the site or its decommissioning. The construction phase is expected to last 18-24 months but given the exclusion of the bird breeding season and problems with winter work as well, is likely to take up parts of three years or more. The CTMP states that the stakeholders to be consulted on road traffic movements are Highways England, Kent County Council, Swale Borough Council, Graveney Primary School, Graveney Parish Council and Graveney Residents Environmental Action Team.

The route to be used from the M2 is the A299 to the Whitstable Road junction then via Head Hill Road to Seasalter Road through Graveney including over the narrow bridge over the railway line close to Graveney Primary School. Construction work in phase 1 includes bringing in all new materials and equipment, creation of a main construction compound, creation of the spine road which will have to be constructed first to reach the furthest extent of the site, other tracks and culverts over the ditches, marking out the locations of the infrastructure, construction of the solar array including piling for the module mountings, trenching and installation, construction of a flood protection bund and site protection for the sub-station and development of the sub-station.

Phase 2, a further 3-6 months includes the creation of the energy storage facility including the installation of cabling, importing components, transformers and battery pads. It is stated that at the peak period for construction, there will be up to 75 heavy goods vehicles per day and 48 light goods vehicles. All of the equipment and building materials have to come through Graveney village, and the road from Head Hill to the site is no more than 5 metres wide. The traffic serving the site would operate between 0700-1900 Monday to Friday and 0700-1300 on Saturdays with no traffic on Sundays or public holidays. No lorries would run for half an hour either side of school opening or closing times. There is no table that sets out levels of vehicles over time during any day or over the construction period except this maximum figure. Details of procedures to receive deliveries and to inform contracting lorry firms of procedures are set out, and there will be a complaints procedure. There will also be a transport co-ordination officer and a traffic management group. This traffic includes abnormal indivisible loads of a type which need to travel with a police escort.

A table sets out that at Head Hill and Seasalter Road, existing levels of HGV traffic are in the range 0.5% to 0.9% of vehicles using the road. This is expected to rise to between 5.4% and 8.6%, the latter figure at Seasalter Road near the entrance to the site. This means that instead of less than one in a hundred vehicles using the road is

a heavy goods vehicle or one in two hundred at Head Hill, up to one in twelve vehicles will be a heavy goods vehicle. These will be going past a school, houses fronting onto the road and a grade I listed church, quiet junctions from minor roads and a small housing estate and a caravan park and over a narrow, angled railway bridge. There are no parts of the road suitable for passing places for lorries, and it is likely that on any trip along the road a motorist or walker would meet a lorry. This will make the character of the road feel very different for users in cars or the occasional bus and for residents and will be more dangerous since there are no pavements at all except in short stretches in the central part of Graveney village and the road at present generally has the appearance of a quiet country lane.

The Faversham Society is concerned that the roads to the site, in particular, Head Hill Road and Seasalter Road are not suitable for the amount and frequency of traffic and the transport of such a high volume of materials and equipment to the site. This is much more extensive in its volume than the works that created the existing Cleve Hill sub-station because of the very large site that will be covered with new installations and the works needed to provide the roads, new ditches and the electrical plant including a substantial compound for battery storage. There is no other route to the site from the major route network, and the roads are enclosed by farmland and houses and runs over a narrow bridge and past a listed church with a walled enclosure so cannot be widened. This traffic is expected to occur over a period taking in parts of three years or more, and afterwards, there will be a small increase in traffic serving the site when in use but this has not been quantified.

Views of the development

The solar farm will occupy a large area of land extending from Nagden eastwards past Warmhouse and Coney Bank towards the Seasalter Road and out to the mouth of Faversham Creek, then extending inside the seawall past Castle Coote towards the west end of Seasalter, with the grassed areas intending eastwards towards the Sportsman public house. This area forms part of a Kent Area of High Landscape Value and a Swale Area of High Landscape Value. The site is visible from long distances including Wraik Hill on the A299 at Whitstable and Boughton Hill on the A2 which have extensive views encompassing the whole marsh, fruit farms with their orchards and polytunnels, Sheppey Bridge, the Swale and the Isle of Sheppey, Victory Wood at Dargate, Harty Church on the Isle of Sheppey, Shellness on Sheppey and Whitstable Harbour. Other more local views can be obtained from Oare Marshes nature reserve, Hollow Shore, Faversham Creek after the sewage works and from the seawall near the Sportsman public house.

Some of the more distant viewpoints above together with other more distant locations and at Nagden, Graveney Hill, Graveney Church and on the seawall between the mouth of Faversham Creek and Castle Coote are assessed using a set of before and after photographs. The developers say that the panels will not be visible above the seawall from close locations such as the Oare nature reserve at Harty Ferry, but since the panels are likely to be well over four metres high on the inside of the wall because this area is one of the most likely to flood and have the highest base level for the panels at 1.2 metres, this is unlikely.

Similarly, they are also likely to be visible over the sea wall when walking towards Nagden Cottages from Faversham and when walking from Faversham to Hollow

Shore on the west side of Faversham Creek. The images show that at Nagden Cottages and Warmhouse, the panels will be dominant in the views of the site and cover most of the land. They will also be very prominent in views of the site all around the seawall from Nagden past Castle Coote, completely changing the character of the view from open arable marshland to an industrial style landscape of glass panels up to five metres at their apex in parallel columns stretching as far as the edge of the marsh. The panels will also be visible and change the character of the marsh from Graveney Hill and Graveney Church.

From Seasalter Road and from the seawall near the Sportsman, the sub-station and battery storage compound will also be visible in front of the existing substation at Cleve Hill serving the London Array wind farm. The areas within 1 kilometre of the site are also likely to experience glint or glare from the panels on the site. These areas include the seawall around the site and where the panels can be seen above the seawall, from the surrounding areas of the coast path.

The Faversham Society considers that not enough photograph viewpoints have been included to assess the full impact of the proposal on the surrounding area and nearby sites including around Faversham Creek and that those chosen seek to show that the panels will only be seen in close views and not in any long-distance views that matter. The extent of the site and the areas from which the panels will be visible will entirely change the character of what has been a huge open area of grazing and arable marshland into a heavily industrialized and developed landscape.

Wildlife

The site forms part of the North Kent Marshes Environmentally Sensitive Area. It is also directly adjacent to the Swale Ramsar site which is designated because of an important assemblage of bird species together with plant species, the Swale Special Protection Area and the Swale Site of Special Scientific Interest, the South Swale Nature Reserve and the Swale Estuary Marine Conservation Area. On the opposite side of Faversham Creek is the Oare Marshes Nature Reserve managed by the Kent Wildlife Trust.

Natural England has confirmed that they consider the land to be functionally linked land to the Ramsar site and SSSI and that birds that contribute to the Swale Assemblage use the land in winter, in particular, Brent geese, lapwing and golden plover. As a breeding site, the land is functionally linked to the Ramsar site for marsh harriers. The letter from Natural England also advises the developer's wildlife consultant to address the needs of bats, water voles and reptiles as protected species. They comment that the addition of wildflowers in any new grazing land might assist with conditions for pollinating insects.

The bat surveys carried out between June, and September 2015 demonstrate that the site functions as a foraging and commuting habitat for bats. Nine species are present including soprano pipistrelles, common pipistrelles, noctules and Daubenton's bats. Bat activity extends over the whole site, and they use the open areas as well as just along the drainage ditches. It is likely that the disturbance during construction would deter bats, and the time taken for any new vegetation to establish may make the area unsuitable as a foraging habitat for several years after

installation. This is because the new vegetation is likely to take up to three years to establish.

Although the site is largely used for arable at present, 172 species of invertebrate were found in the surveys carried out in July 2015. Of these, over 30 species were either locally significant or of national significance including species of beetle, bugs, flies, bees and planthoppers. One variety of fly is nationally rare, and eleven insects are nationally scarce. The clearing of parts of the site to install the spine road and install the panels is likely to have a detrimental impact on the insect population which in turn feeds birds and bats. Re-establishment of vegetation on the site will take several years, so that cover and food plants for insects will be absent.

The site is best known for birds, and it is mainly in this context that it should be considered in connection with the wildlife designations of the Swale mudflats and beaches and the land along the seawall. Wintering bird surveys were taken in 2013/14, 2014/15 and 2017/18. The two earlier surveys show that up to 3400 Brent geese can be found on the farmland together with up to 600 oystercatchers, 300 golden plovers, 240 Avocets, 300 wigeons, 1000 Dunlin and 300 redshanks. Figures from 2017/18 confirm that many birds use the arable and grazing marshland on the site including 1800 Brent geese, 115 Shelduck, 690 wigeon, 160 teal, 22 little egret, 1190 Oystercatcher, 194 Avocet, 1770 golden plover, 150 grey plover, 1000 Lapwing, 1660 knot, 23 Ruff, 3000 Dunlin, 380 black-tailed godwit, 150 bar-tailed godwit, 160 Curlew and 370 Redshank. These represent, for most species, at least nationally important numbers. The land is also used in winter by short-eared owls and peregrine falcons in winter. The birds use many parts of the site, not only the western end.

A map shows that there are breeding birds all over the site, not only in the ditches and along the existing tracks. These include skylarks, dunnocks and yellow wagtails together with reed buntings. There are also nesting sites throughout the area for oystercatcher and lapwings. Most of these are ground-nesting birds and rely on insects to feed their young. They need cover and lack of disturbance that exists across the site because of its use as farmland with limited access.

As a feeding and roosting area, Brent geese use most of the land, shelduck use land at the west end, little egrets are widespread in their use of the land, mallards use the south parts of the land, and golden plovers and lapwing use the whole site. Many species also use the land area at night including lapwing, golden plover, snipe, short-eared owls, shelduck and mallard.

Maps also show that raptors feed and hunt over the whole site. They show the flight paths of the birds which include short-eared owls, peregrine falcons, hobbies and marsh harriers. These birds mostly fly at less than 10 metres above the ground while hunting and thus are likely to find most of the site impossible to use either because of disturbance during construction or when the panels are in place.

All of the species that nest or feed on the whole site, roost on it, rest on it or hunt over it would be affected by the panels which will cover much of the area. It is considered that for this reason, the development would be harmful to the Ramsar

site, the SSSI and to the other wildlife designations by taking away a large area of functionally linked land.
The developers have sought to mitigate against the loss of all the land by proposing to keep part of it at the east end and improving the habitat specifically for Brent geese, lapwing and golden plover. This includes the additional area which is within the SSSI to the east of the site proposed in the original scheme. The Faversham Society considers that this would not adequately compensate for the loss of wildlife habitat across the whole site. It is not mitigation to take away all but a small part of a site and retain this in a better condition with the inclusion of another area of land that is already suitable for a bird roost and feeding area.

The developers propose to add grazing land under the panels with a mix of grasses and wildflower species and to graze sheep. They state that it may be more difficult to establish such a mixture where the land has been arable as it is too fertile and that this land will need more intensive management. They also propose shelter belts including poplar and alder and other species along the southern boundary, some scrub near the seawall including hawthorn and blackthorn, supplementing existing hedgerows at the south and east sides of the site and boundary planting around the site compound. They also intend to convert the existing pill box so that it can contain a bat roost. All of these changes may improve the appearance of the area. However, they are not considered to constitute adequate compensation for the loss of a major area of marshland which contributes to and is functionally linked to the Swale estuary wildlife designations.

Footpaths
As part of the assessment of the visual impact of the proposal, the developers have assessed each of the viewpoints for the sensitivity and susceptibility of the users. The series of viewpoints include two sites on the sea wall which is the Saxon Shore Way and the National Cycle Network. The footpath through the site at the Seasalter Road end is also assessed and the path through the middle of the site from Nagden to Castle Coote. In all cases, it is considered that the development would have a substantial impact on the appearance of the paths and in all cases, the users would be highly sensitive and susceptible to being affected by the change.

For the footpath through the site from Nagden Cottage to the seawall near Castle Coote, the entire path would run between lines of solar panels that are around 4 metres high so that a walker would not be able to see over them, only along and drainage ditches and when crossing the spine road. Any additional permissive paths provided as part of the development would have similar views. For the sea wall which is the Saxon Shore Way, the location of the panels has been altered so that they would be set back 60 metres from the path.

Despite this, any walker from Faversham to Seasalter would start by looking along the lines of solar panels parallel with them and then looking down columns of panels stretching as far as the back of the marsh except for the gap of the spine road and the drainage ditches. A line of new culverts would stop the end of all the ditches. At the end of the solar farm, their next view would be the battery compound and sub-station across the grazing marsh. For the path at the Seasalter Road end, there would be views of the sub-station and across the marsh towards the solar panels extending to the sea wall. New security fencing is also expected to be provided along

the footpaths as has been installed at the smaller solar farm off Abbey Fields. The character of all of these footpaths would be changed beyond recognition. Further, it is likely that for the first three years from 2021, the footpath across the site from Nagden to Castle Coote would be closed for construction works and the Saxon Shore Way would be a view of a building site.

For these reasons, the Faversham Society considers that the impact of the works on the amenity of users of the footpaths through and around the site would be unacceptable both in the short term during building works and in the longer term with the solar farm and its connection to the grid and battery storage installed.

Conclusion

For the above reasons, the Faversham Society considers that the Secretary of State should refuse the Development Consent Order for the development of the solar farm at Graveney, Nagden and Cleve Marshes and associated works.

Anne Salmon BA MCD MRTPI
Faversham Society

C. Outstanding Questions

1. Given your intention to take ownership of the seawall, how does the Environment Agency retain responsibility and accountability for environmental protection?

2. How does the Environment Agency retain responsibility and accountability for flood protection of Faversham and the surrounding area?

3. Are the developer's proposals for managing the seawall consistent with the Medway Estuary and Swale flood and coastal risk management strategy?

4. What was the result of any consultations with Natural England about their planned coastal path from Whitstable to Iwade? At the moment your plan shows the area you intend for the power station as ‘South Swale Local Nature Reserve’.

5. How do you gain approval from Natural England when their consultation about this section of the English Coastal Path ended on the 17th September 2017?

6. Since you have been planning the solar power station (SPS) why did you not take part in that consultation – given the detrimental effect the SPS will have?

7. When do you intend to consult the Kent Ramblers’ Association about the destruction of amenity value?

8. What are the risks of a major incident on the site in the during construction phase? During operation? During decommissioning?

9. What is the particular risk of explosion on the site? What would be the consequences? Have those risks been mitigated in the proposal? If so how?

10. Have Kent Fire Services, Kent Police and SECAmb been consulted about how they will service the site?

11. As this would be the biggest solar power station in Europe, it will be an obvious and relatively ‘soft' terrorist target? Have there been discussions with the Home Office about this new national security issue?

12. How do the security arrangements you propose compare with those made for a UK nuclear power station?

13. What effect will effective counter-terrorism security arrangements impact on the amenity value of the Saxon Way and Natural England footpaths?

14. What conversations have you had with SECAmb to ensure that local resident's access to emergency medical care is not compromised particularly in the construction phase?

15. How sensitive is the viability of the SPS to fluctuations in the price of energy?

16. At what price would the SPS become unsustainable?

17. How sensitive is the viability of the SPS to the cost of capital / cost of borrowing?

18. How have these risks been mitigated?

19. What are the periods going forward where the viability of SPS is particularly sensitive to these or other risk?

20. Assuming energy prices remain stable and no new supply enters the market how long will it be before the SPS becomes profitable?

21. If the SPS is built how long have you estimate it will its operation remain sustainable?

22. What will make the plant unsustainable?

23. What would make the current technology redundant?

24. What will be the cost of decommissioning the plant?

25. How do you intend to assure the public and government agencies that the developers will remain responsible for decommissioning the plant - even if the original companies involved become bankrupt?

26. What guarantees will you offer Swale and Kent Councils that they will not be left responsible for the costs of decommissioning and environmental restitution?

27. How vulnerable will the SPS be to a shift from old national-grid based energy production and distribution to the fast emerging community distributed models?

28. Have you modelled the effect on the SPS sustainability if fracking is allowed in this country?

29. Who actually owns the companies involved in developing and constructing the SPS?

30. Are they UK based companies for legal and tax purposes?

31. Are all the Directors with fiduciary responsibilities on the Boards of developers and builders UK domiciled?

32. How can you assure the public that all the companies involved directly and indirectly through contracts are UK based and will pay full UK taxes?

33. How can you assure the public that all of the companies directly involved and their contractors pay their staff a living wage?

34. How can you assure the public that you will not use zero-hours contracts?

35. How can you assure the public abide by best practice regarding equality and diversity?

36. Are the companies involved confident that they have managed to consult with all sections and groups in the population affected?

37. What efforts have been made to reach the hard to reach groups and consult them?

38. What processes will be required to ensure data protection relating to the security cameras surrounding the site? How will walkers' anonymity be protected?

39. Who will see images and under what circumstances?

40. What will be the exact impact on air quality during the construction phase?

41. When will we see the agreed plans with RSPB and KWT for the restoration of habitat?

42. What assurances are you able to give that the wildlife will continue to use the site as now?

43. When will you provide your detailed plans to explain how biodiversity on the site will be increased?

44. What is the environmental impact related to the manufacture of the SPS's solar panels, batteries and other hard facilities to be deployed?

45. Where will the solar panels and batteries be manufactured?

46. Where are these effects factored into the environmental impact assessment?

47. What analysis have you undertaken of the effect that the destruction of the amenity value of the marshes will have on the small and medium-sized local businesses that serve residents and visitors? What will be the economic impact on businesses in and around Faversham?

48. How many jobs will be created during the construction phase?

49. How many of those jobs will be reserved for local people?

50. How will the developers ensure that they or the contractors they use do not draft in their workforce from outside the region or country?

51. What guarantees can you give the people of Faversham and Swale that they will not be subject to an influx of migrant labour putting pressure on public services that are already hard-pressed to meet demand?

52. If there were to be such a workforce how do developers and their contractors intend to satisfy their housing and service needs?

53. What plans do developers have to meet the healthcare needs of any such workforce?

54. What arrangements are there to compensate local people with reduced energy costs to compensate for the disruption to their lives during the construction phase and the loss of amenity value once the plant is operational?