



**Defence  
Infrastructure  
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The Planning Inspectorate  
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9<sup>th</sup> July 2019

Dear Sirs

**Your reference: TR02002**

**Application by River Oak Strategic Partners for an Order granting Development Consent**

I am writing to provide Ministry of Defence (MOD) comments on the applicant commissioned Phase 1 A – Manston HRDF – Relocation – Feasibility Study Report authored by Aquila Air Traffic Management Services, the Applicant's Answers to Fourth Written Questions (TR020002/D9/FWQ), the applicant's Update on Relocation of HRDF (TR020002/D11/RHRDF), and the Applicant's Overall Summary of Case (TR020002/11/OSOC).

This response has been co-ordinated by the Defence Infrastructure Organisation (DIO) who, in consultation with the Royal Air Force and Programme Marshall, provide the MOD's comments on this site and development. MOD's appointed contractor to provide and maintain transmitter/reciever equipment and associated infrastructure used to deliver air traffic management services is provided by Aquila Air Traffic Management Services. This contract is managed by Programme Marshall.

MOD involvement in this project has been necessary as the development will affect both safeguarded technical equipment on the site and MOD owned land. It should be noted that the technical equipment, a High Resolution Direction Finder (HRDF), currently operates as it should and provides a level of coverage which is acceptable, at this time MOD has no operational need to relocate or otherwise alter this equipment.

An HRDF is an antenna and associated equipment which, in conjunction with similar units in other locations, provides a navigational aid to aircraft operating within its range. At Manston Airfield this resource consists of an antenna and receiving equipment, the antenna is at the centre of a 120m radius area within which no structures are permitted. This 120m radius is required by the provisions of Joint Service Publication 604 (JSP 604) and also protected by a legal covenant. At this time, no evidence has been provided to demonstrate why this area could or should be reduced.

**A. Aquila Phase 1 A – Manston HRDF- Relocation Feasibility Study Report.**

MOD received a copy of an Aquila report commissioned by the applicant on the 28th June 2019. The report submitted is an initial feasibility study that would, along with a number of other studies, provide an appropriate evidence base to assess the viability of a re-provided HRDF system. The report provides analysis of potential sites from which re-provided HRDF equipment could be operated, the review of sites was conducted using computer modelling in accordance with current Joint Service Publication 604 (JSP 604) criteria to demonstrate the potential capability and coverage of each potential HRDF location against proposed Development Consent Order (DCO) development.

MOD has indicated to the Applicant that, in principle, it is possible that the HRDF could be re-provided assuming that the replacement facility would comply with MOD siting requirements; that the new technical facility would have to be tested to verify that its performance capabilities are to the standards required by MOD; that the siting of a new technical facility would be compatible with MOD Safeguarding requirements and relevant safeguarding zones to protect the operation of the new facility are put in place. The freehold of any new site would have to be conveyed to MOD and a relevant covenant put in place in any site acquisition documents whereby no building or structure could be erected above ground level within 120metres of the HRDF equipment (or equivalent zone required by safeguarding criteria relevant to any new type of equipment installed at a new site to undertake the function of the current HRDF).

The Aquila report assessed a total of nine alternative locations for siting HRDF equipment. One of these sites, Site 1, was originally identified in March 2018. Site 1 is located outside the order limits as is the nearby Site 1a. Whilst Site 1 has been the option offered by the applicant from the beginning of the DCO application and is the site that has formed part of the dialogue with MOD in the Statement of Common Ground, Aquila's analysis concludes both Sites 1 and 1a to be non-viable due to terrain impacting coverage and triangulation services with Thorney Island and Wattisham HRDF.

The majority of the sites examined within this report have been demonstrated to be non-viable. The report concludes by identifying three potentially viable sites, the proposed Air Traffic Control Tower, an existing Microwave Tower within the boundary of the Defence Fire Training and Development Centre and a Radar Tower.

**(i) Proposed Air Traffic Control tower.**

This is an element of the proposed development that forms the subject of MOD objections. The Air Traffic Control tower structure proposed has the potential to have a significant detrimental impact on the operation of the existing HRDF facility as it falls within the safeguarded area. MOD cannot accept this siting option as it would not satisfy the requirement of having new equipment in place, operational and tested to acceptance before the existing HRDF could be withdrawn. It should be noted that an assessment will be required to demonstrate that the HRDF equipment would be operationally compatible with other technical assets to support the airfield.

**(ii) Microwave Tower within boundary of Defence Fire Training and Development Centre.**

The second option identified is an existing tower on MOD land (within the boundary of the Defence Fire Training and Development Centre). This tower is also utilised by third parties and is the subject of a contract with Arqiva. It is proposed that the HRDF equipment would be placed on the Arqiva tower alongside existing antenna(s). The report indicates an HRDF relocated to this location is unlikely to be adversely affected by the proposed development. However, the report does not establish whether the HRDF will compromise the operation of the existing antenna on the tower nor with new airport technical assets required to support the airfield operations. MOD commented on the use of Fire Station being submitted as a potential re-provision site on the 14th June to the Examination Authority, stating they did not want this site to be included as part of any analysis. MOD are concerned with implementing the HRDF equipment on towers due to the additional requirements to maintain the asset and the potential to compromise its estate.

**(iii) Radar Tower**

The final site identified as viable is the proposed Radar Tower, again this location is within the order limits of the site and not under the control of MOD. The use of this site conflicts with the applicants proposed use of the site in their current development plans and at present has no infrastructure in place to support the HRDF installation. This potential location has not been modelled in the same way as the other two, no projected coverage plan is provided within the report.

In summary, the Phase 1 A – Manston HRDF – Relocation – Feasibility Study Report provides no information regarding how a new HRDF asset will address MOD requirements within the context of the proposed development and surrounding area nor does it identify the technical safeguarding criteria for the new piece of equipment. In addition, the Aquila report provides insufficient information for MOD to be able to consider whether any of the preferred siting options are viable or compatible with existing or new navigational aids or airport operations, the proposed use/future development or the context provided by the surrounding area (topography etc.). MOD require freehold ownership of the land on which the HRDF

equipment would be sited, at present two of the identified sites are part of the proposed Manston Airport development which is not acceptable to MOD.

## **B. DIO comments on the Applicants response to the Examining Authority Fourth Written Questions High Resolution Direction Finder (HRDF)**

### **(i) Applicant's response to CA 4.20**

The applicant has stated in response to CA.4.20 that £100,000 has been factored into general costs to meet the re-provision of the HRDF. MOD believe this amount will need to be considerably higher as the applicant will need to acquire an appropriate parcel of land, cover costs regarding completing infrastructure installation including the purchase of a new HRDF provision, flight testing/assurance acceptance and costs to establish the commercial agreements as well as all MOD costs for technical delivery and estate re-provision.

### **(ii) Applicants response to OP.4.8 HRDF and Construction Timetable**

The applicant replied they do not accept the potential two-year twin track/evaluation period, has inferred that a period of days may be adequate, and that Aquila and Programme Marshall will decide what period is required if any. The applicant suggests that at least two of the options being considered by Aquila could be implemented ahead of the airport development activity.'

MOD wish to re-affirm that any new air navigation related technical installation such as an HRDF must be proven and accepted by the Military Aviation Authority. This will entail extensive testing (including flight trials) and a period of operation before final acceptance. A contractual programme to implement this (at the applicant's expense) would need to be established in the event MOD did consent to the relocation of the HRDF. It is not possible to define exactly how long this may take and it is possible this may need to be extended if performance issues are identified or it may even conclude the installation cannot be accepted into service. The 2-year period identified is an indicator of what may be needed but should not be taken as a definitive timescale. The suggestion that this process could be completed in a few days is entirely inaccurate and unrealistic.

It should be noted that MOD is currently implementing an extensive programme to implement an essential upgrade to air navigation technical installations across its estate both in the UK and at its sites overseas. As such any MOD involvement in the installation, testing and evaluation will have to feed into the existing programme. At this time it is projected that upgrade works to existing infrastructure will be ongoing for a period of at least three years.

MOD, as noted above, raise concerns regarding the Aquila report and the sites recommended for the re-provision of the HRDF. The site options within the report identify it has used the current JSP 604 Radio Site Protection (RSP) criteria relevant to the current HRDF equipment in use. The report does not specifically identify the type of re-provided HRDF equipment nor its manufacturers technical specification and it does not identify any variation of the current criteria (JSP 604) when identifying potential re-provision sites. Any replacement equipment would have to be safeguarded in accordance with MOD defined RSP criteria. The proposed sites would need to be assessed against these criteria. The site options identified above do not provide the freehold requirement of MOD.

## **C. Applicants proposed Requirement regarding the re-provision of the HRDF**

As previously stated in the response to the Examining Authorities fourth written questions, MOD maintains its objection to the development on the basis that the proposals would have a significant and detrimental impact on the capability of safeguarded technical equipment located within the boundaries of the development. At this time, no acceptable scheme detailing location, specification of equipment or technical mitigation has been submitted for the provision of what would, ultimately, be a replacement HRDF system. This lack of evidence does not currently indicate any prospect that replacement HRDF equipment with the same or better capability could be provided.

The Examining Authority suggest a requirement be added to the draft Development Consent Order that requires that:

*'no Works within the safeguarded area shown in the Ministry of Defence (RAF Manston) Technical Site Direction 2017 [REP7a-025] shall commence until the Ministry of Defence confirm in writing to the relevant planning authority that the High Resolution Direction Finder (HRDF) has been relocated from its position within the Order Limits and is fully operational to the satisfaction of the Ministry of Defence following, if required by the Ministry of Defence, a period of dual operation of the existing and the relocated HRDF.'*

MOD note that the applicant has provided comments on this text and have recommended revised requirement wording that is significantly less precise than that suggested by the Examining Authority:

*'no works within the safeguarded area shown in the Ministry of Defence (RAF Manston) Technical Site Direction 2017 [REP7a-025] shall commence while the Direction is in force without the consent of the Ministry of Defence in writing.'*

For the avoidance of doubt, the HRDF unit on site is a critical piece of air navigation technical equipment used by both MOD and civilian aviation operators. The equipment is used to precisely locate transmissions from aircraft and support the delivery of air traffic control functions. The mast serves as an integral part of UK wide network (the UK Diversion and Distress Facility) which is used to locate aircraft or personnel and direct rescue emergency response capabilities for the management of air safety incidents. The equipment benefits from a Technical Site Direction 2017 [REP7a-025] and associated plan to secure the full operational capability of the equipment and to minimise the impact of nearby development.

The scheme proposed contains a number of elements likely to have a detrimental impact on the function of the HRDF system and as such it is paramount that no development takes place until a viable mitigation scheme to provide an alternate HRDF system has been produced and agreed in writing with MOD. This mitigation scheme should contain siting location(s) for the equipment, full specifications for the equipment and associated infrastructure proposed and the technical data necessary to generate the safeguarding criteria that would apply to the new equipment. These requirements are considered necessary to ensure no loss of capability, relevant to both planning and the development to be permitted, enforceable, precise and reasonable in all other respects.

In order to ensure that the replacement equipment, which is likely to be provided outside the DCO boundary, is serviceable a period of testing and evaluation will be required before it is accepted into service. This testing and evaluation period will require that the existing HRDF capability is maintained. Development that might occur within this testing and evaluation period has the potential to degrade or compromise the capability of the existing equipment which should be unaffected until such time as the replacement has been accepted into service. As such a requirement preventing development until the equipment detailed in the mitigation scheme has been declared fully operational in writing by MOD is considered appropriate.

A further condition is required to ensure safe removal of the, by then, obsolete equipment, a requirement should be added to ensure that the decommissioning and removal of the existing HRDF is carried out in an appropriate manner and with such timing that the removal of the existing equipment does not prejudice the operation of the 'replacement' HRDF unit.

DIO refer the Examining Authority to our previous submission dated 28th June 2019 where a suggested wording for each of these three requirements has been laid out.

#### **D . Applicant's overall summary of case and update on Relocation of HRDF**

In both these documents the Applicant has sought unsuccessfully to try diminish the arguments put forward by the Ministry of Defence and to suggest that it has not adopted a coherent approach which the comments above demonstrate is not the case.

In conclusion MOD maintain our objection on the basis that insufficient information has been submitted to provide any positive indication that potential harm to safeguarded operational defence assets can be overcome or readily mitigated

Yours faithfully



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